Miss [illegible]

VOL. 72 NO. 8

textile bulletin

JUNE • 15 • 1947

On Pages 34 and 35 of this issue we give you the latest from Britain: a pictorial story on the new fiber, Terylene, plus an article about hand spinning and weaving.

RESEARCH IN SOCIAL SCIENCE
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ABP
ABC

ADVERTISING INDEX—PAGE 61

No Wonder They're Perfect!

. . . they're tailor-made by experts, these

CHARLOTTE Long-Draft

SPINNING APRONS

They're accurately cut to fit your exact specifications in size and thickness, from carefully selected, highest grade calf skin. Skilled craftsmen with many years of experience handle every detail of their production. We repeat—no wonder they're perfect and are so famous for their outstanding performance in scores of southern mills.

Our convenient location in the very heart of the southern textile manufacturing area is an important factor in rendering "service when you need it."

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LEATHER BELTING COMPANY
CHARLOTTE, NORTH CAROLINA

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

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Bahnson

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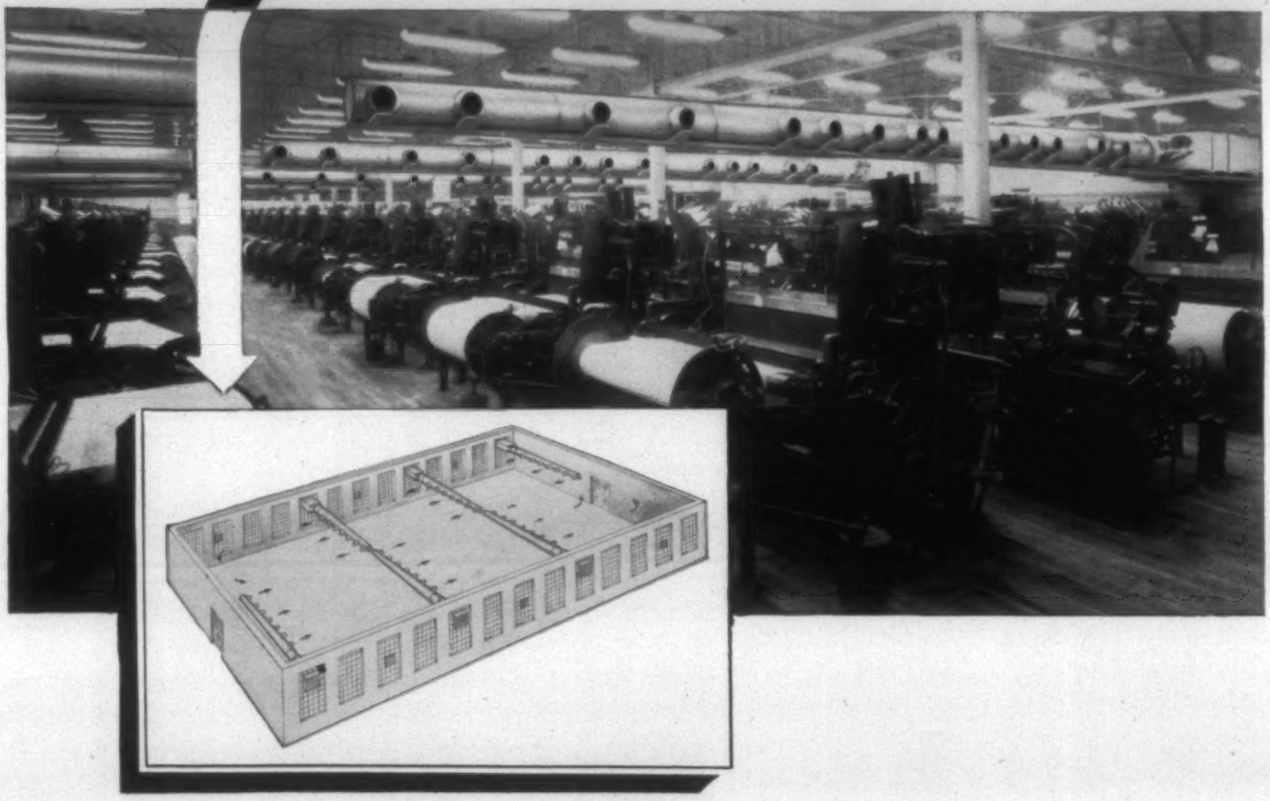

"Positive circulation" is a Bahnson principle of directional air flow to afford maximum worker comfort in industrial plants with high heat load areas. A more comfortable effective temperature is obtained with the Bahnson Humiduct System through evaporative or refrigerative cooling, air change ventilation, uniform distribution, and positive air movement.

The Bahnson Humiduct System conditions the air of modern industrial plants in any desired form with automatic controls to give flexibility and economy to your plans for expansion or modernization.

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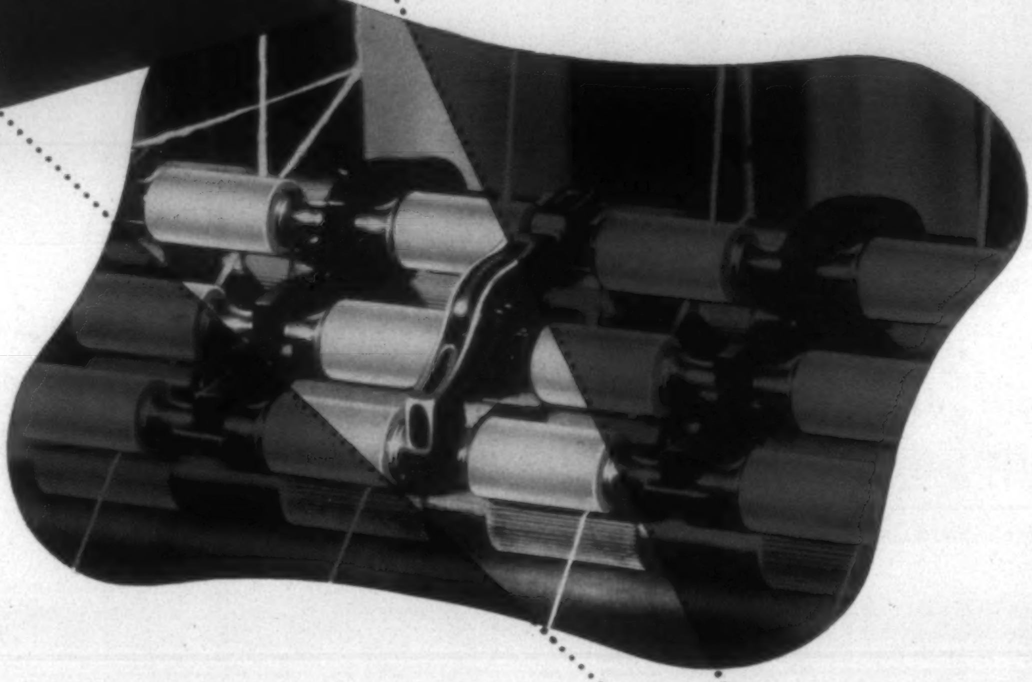
Daycos never groove, hollow out, flatten or distort



Dayco roll coverings are especially engineered with an extremely durable surface, perfect cushion and exactly the right coefficient of friction. That's why they won't groove, hollow out, flatten or distort, no matter how long they run . . . why they outlive all other type roll coverings.

Whether you use flat or revolving clearers, whether you draft cotton or synthetics, Dayco roll coverings will produce better quality yarn, more economically. A Dayton textile product engineer will gladly prove this to you. He'll call at your convenience. Write today, to . . .

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Factory: Waynesville, N. C.

ADDITIONAL REASONS WHY YOU SHOULD USE DAYCO COVERINGS

- Large reduction of ends down
- More of the foreign elements are removed from yarn
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- Same trouble-free service, for special types of synthetic and synthetic blends of yarn
- Not affected by humidity or temperature changes
- Oil resisting and static-free
- No grooving—less ends down
- Easy to apply

Dayton Rubber

How to add *Life* to your CARD CLOTHING

To get best results from flexible card clothing, see that the fillets are put on the cylinder or doffer with the correct tension. Then to insure continued top performance and to add life to the clothing, redraw when necessary.

If the grinder discovers raised or lifted fillets, he should report it immediately, for such a condition permits the wire to be pushed underneath the fillet; the angle of the wire setting is changed and the carding capacity of the wire is destroyed. On the other hand if raised or lifted fillets are redrawn promptly, while the wire is still in good condition, efficient carding action is again assured and the life of the clothing will be greatly prolonged.

The best way to detect raised or lifted fillets and other card defects is to have your cards inspected at regular intervals. An Ashworth service man will do this for you, free of charge, and will arrange a repair program which will involve minimum expense and minimum loss of productive time.

Ask us about it.

ASHWORTH BROS., INC.
AMERICAN CARD CLOTHING CO. (Woolen Div.)

Fall River*†‡ Worcester*‡ Philadelphia*†‡ Atlanta†‡
Greenville†‡ Charlotte †‡ Dallas†‡ (Textile Sply. Co.)
**Factory* †*Repair Shop* ‡*Distributing Point*

PRODUCTS AND SERVICES — CARD CLOTHING FOR COTTON, WOOL, WORSTED, SILK, RAYON AND ASBESTOS CARDS AND FOR ALL TYPES OF NAPPING MACHINERY • BRUSHER CLOTHING AND CARD CLOTHING FOR SPECIAL PURPOSES • LICKERIN WIRE AND GARNET WIRE • SOLE DISTRIBUTORS FOR PLATT'S METALLIC WIRE • LICKERINS AND TOP FLATS RECLOTHED.

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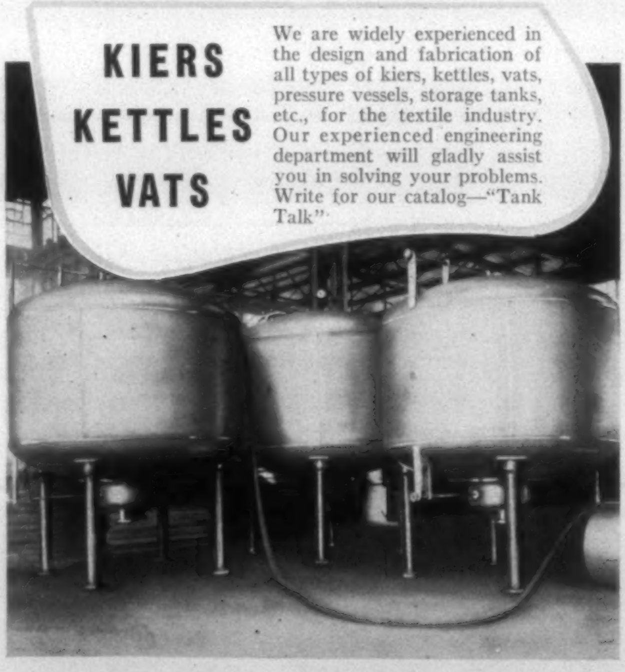


KIERS
KETTLES
VATS

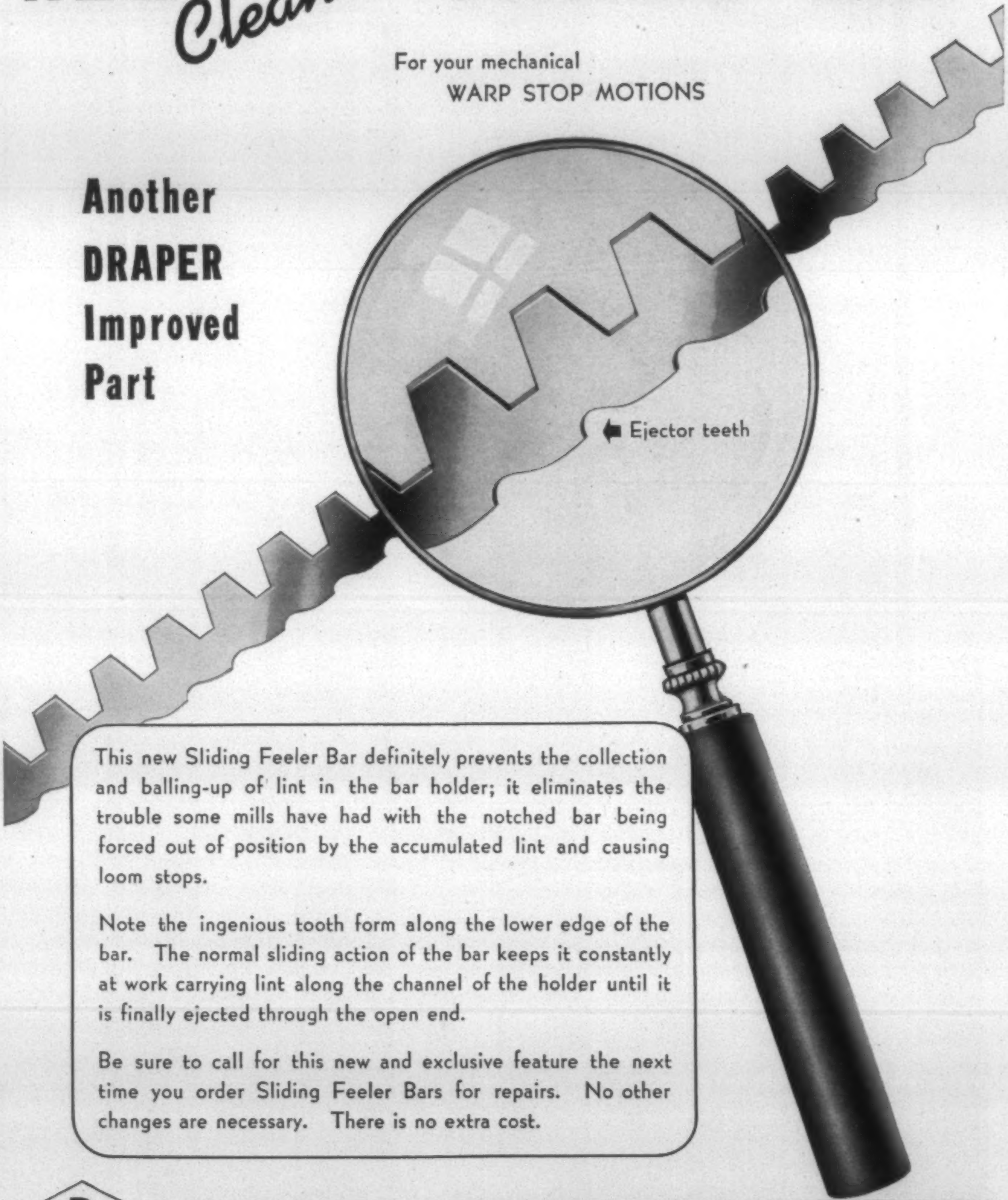
We are widely experienced in the design and fabrication of all types of kiers, kettles, vats, pressure vessels, storage tanks, etc., for the textile industry. Our experienced engineering department will gladly assist you in solving your problems. Write for our catalog—"Tank Talk".

R.D. COLE MFG.CO.
Newnan Ga.
ESTABLISHED 1854

NEW *Self Cleaning* SLIDING BAR

For your mechanical
WARP STOP MOTIONS

**Another
DRAPER
Improved
Part**



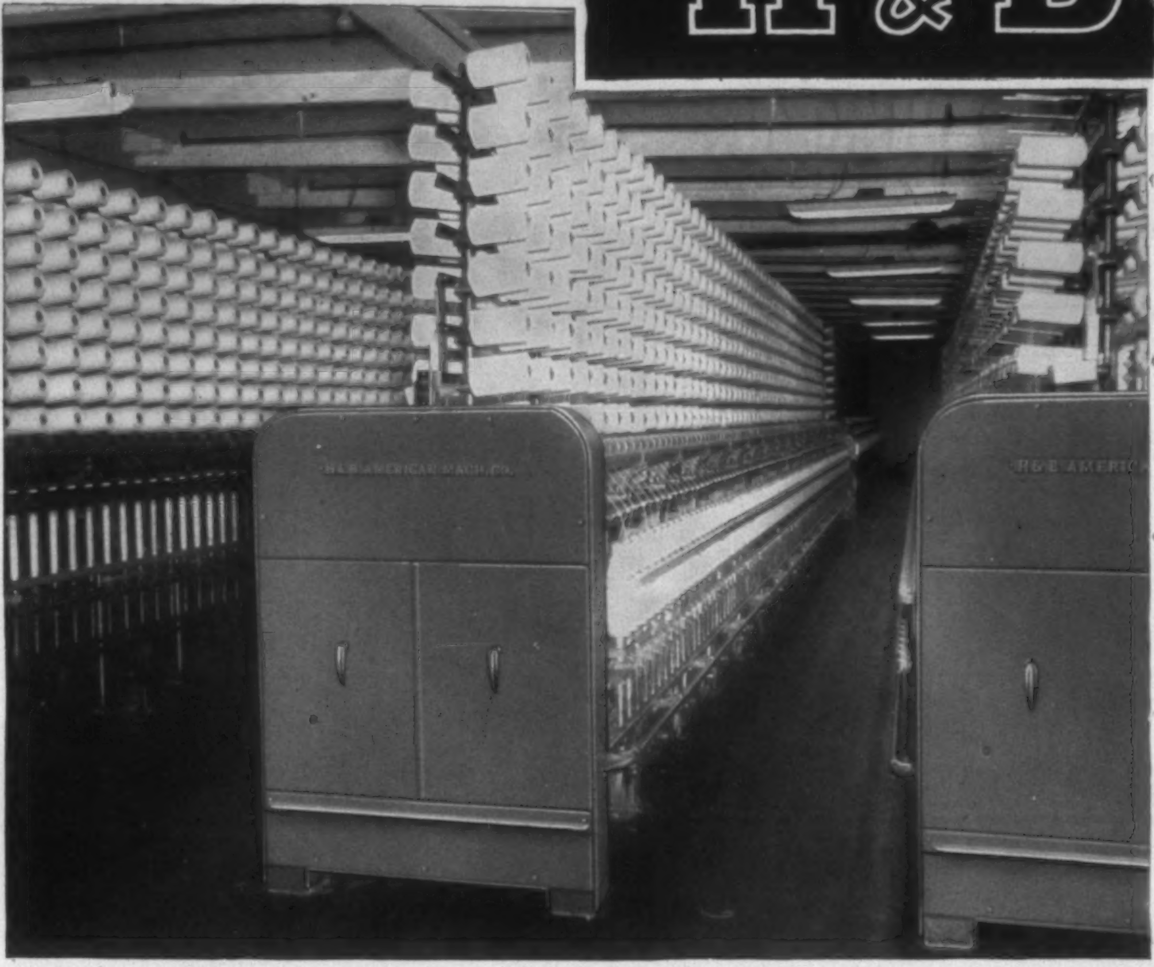
This new Sliding Feeler Bar definitely prevents the collection and balling-up of lint in the bar holder; it eliminates the trouble some mills have had with the notched bar being forced out of position by the accumulated lint and causing loom stops.

Note the ingenious tooth form along the lower edge of the bar. The normal sliding action of the bar keeps it constantly at work carrying lint along the channel of the holder until it is finally ejected through the open end.

Be sure to call for this new and exclusive feature the next time you order Sliding Feeler Bars for repairs. No other changes are necessary. There is no extra cost.

D **DRAPER CORPORATION**
HOPEDALE – MASSACHUSETTS U. S. A.

H & B



H & B Twisters, built exactly to exact specifications, assure high quality finished yarn with an even twist. They deliver a well shaped, firm bobbin carrying the maximum yardage permissible within the natural limits imposed by traverse and ring diameter. Whether this twisted yarn is used for duck, high quality broadcloths, gabardines, tire cord or sewing thread, you can depend on H & B. Our engineering provides the right builder motion for trouble-free run-off on any type high speed winder, or in any other subsequent operation.

Additional features of H & B Twisters contribute to the quality of the twisted yarn and to the safety, ease and economy of operation of the machine. These are "the little things that make a big difference".

H & B AMERICAN

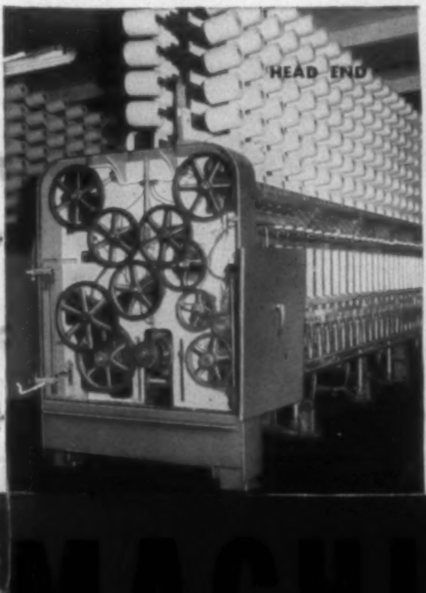
Builders of Modern

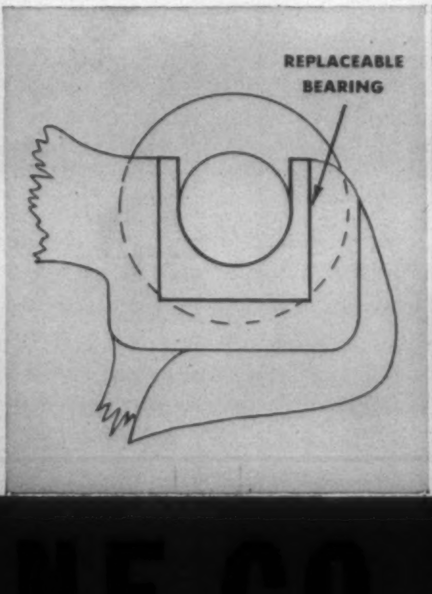
FACTORY, EXECUTIVE OFFICES AND EXPOR

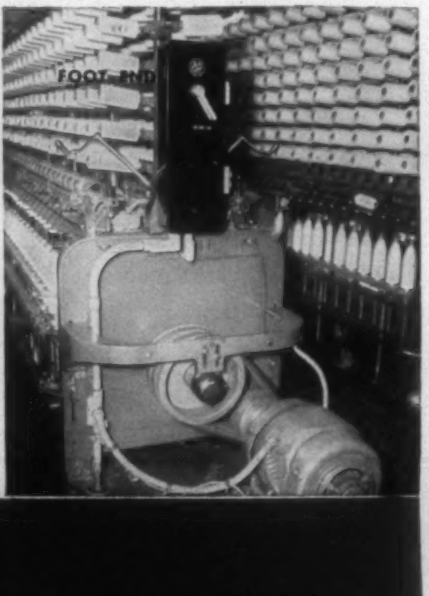
TWISTERS

IT'S THE LITTLE THINGS *that make a Big Difference*

1. A new type metallic traversing thread board that helps assure even yarn tension.
2. An anti-friction tension pulley that helps to maintain constant spindle speed.
3. Wet twisters are equipped with an automatic water feed control that keeps the same level in troughs, thus permitting even water penetration.
4. A ball bearing thrust washer in the builder drive that prevents dwelling at top and bottom of the stroke and particularly aids effective high speed winding.
5. An electric stop motion that prevents starting of machine when doors are open.
6. A silent chain drive from cylinder to jack shaft.
7. Replaceable bottom roll bearings to reduce maintenance cost.
8. Anti-friction bearings on cylinders that save power and maintenance.







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There's no denying "tightness" in many types of papers. But textile producers find that paper problems are fewer and less pressing when they tie in with the four HENLEY warehouses and sales divisions!

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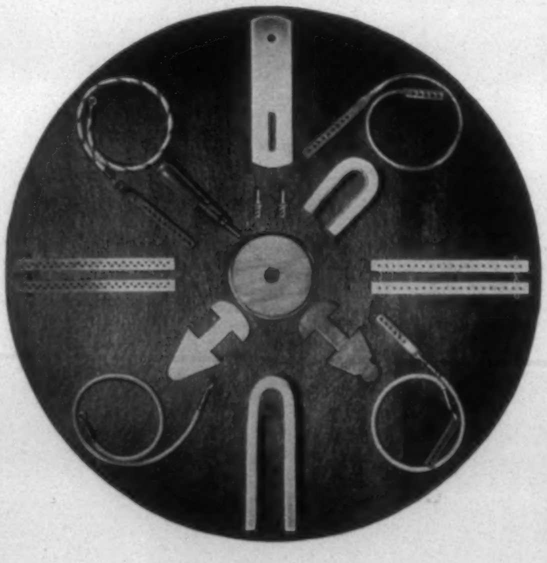

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To capitalize the selling power of Color in the competitive days ahead, always specify National Aniline Dyes.

WHEREVER COLOR IS USED

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IT'S *Ponsol**

BROWN RBT PASTE

"PONSOL" Brown RBT Paste produces cocoa brown shades having outstanding fastness to light . . . very good resistance to washing, chlorine, crocking and cold- and salt-water spotting . . . good fastness to hot moist pressing, perspiration and dry cleaning.

This anthraquinone vat color gives excellent results by pad-jig application as well as by the Du Pont Pad-Steam Continuous Dyeing Process. It may also be used in package or circulating-type dyeing machines.

"PONSOL" Brown RBT Paste is a good base for chocolate browns and is equally suitable as a shading color. It is especially well adapted to use on cotton and viscose rayon materials for sportswear, upholstery and drapery fabrics, shirtings, and uniform cloths.

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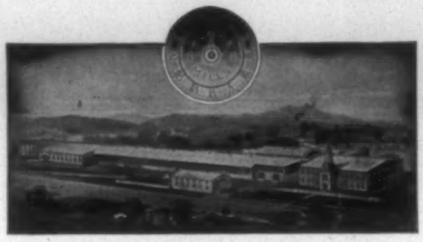


Established 1831

NOONE'S

Standard Slasher Cloths

Ask for NOONE'S SLASHER CLOTHS by name or style number.

Long experience in manufacturing Slasher Cloths and continuous experimenting have enabled us to produce several types of Slasher Cloth, each especially constructed to give best results on the particular kind of yarn to be sized.

The proper Slasher Cloth for each type of yarn means properly sized warps, less loom stops, easier weaving, more and better production, and lower cost. We can supply you the right cloth for your particular work. On request, we will have our representative call and discuss Slasher Cloths with you.

We are the oldest manufacturers of Slasher Cloth in America. Our experience enables us to build a Slasher Cloth that will meet your most particular demand. Use NOONE'S SLASHER CLOTHS and be convinced.

Sole Agents For

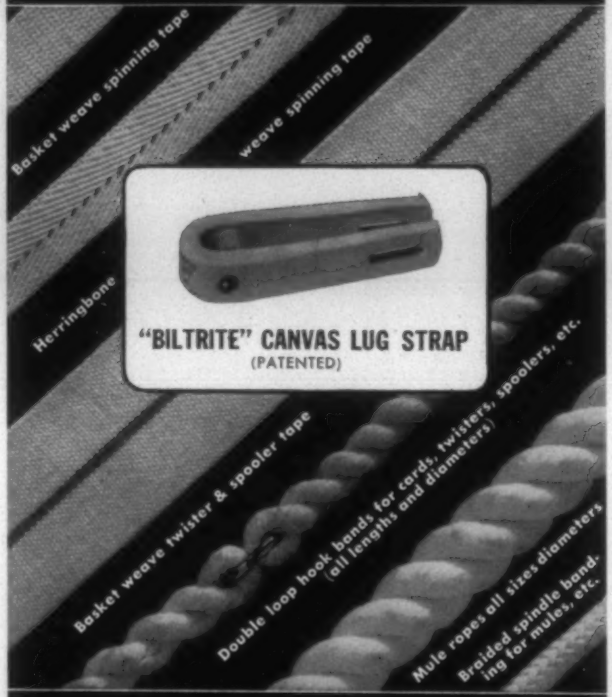
The Joseph Noone's Sons Co.

Peterborough - - - - - New Hampshire

Use

NOONE'S ROLLER CLOTHS
NOONE'S SLASHER CLOTHS
NOONE'S CLEARER CLOTHS

LAMBETH PRODUCTS
FOR SPINNING, TWISTING, SPOOLING, WEAVING



Basket weave spinning tape
weave spinning tape
Herringbone
"BILTRITE" CANVAS LUG STRAP
(PATENTED)
Basket weave twister & spooler tape
Double loop hook bands for cards, twisters, spoolers, etc. (all lengths and diameters)
Mule ropes all sizes diameters
Braided spindle banding for mules, etc.

LAMBETH ROPE CORPORATION
NEW BEDFORD, MASS., U. S. A.

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Double Duty Travelers

NATIONAL RING TRAVELER CO. PAWT. R. I. U.S.A.

Reg. U. S. Pat. Off.

HICKS — AMERICAN — WILSON — U. S. STANDARD

Last Longer, Make Stronger Yarn, Run Clear, preserve the SPINNING RING. The greatest improvement entering the spinning room since the advent of the HIGH SPEED SPINDLE

NATIONAL — ETARTNEP FINISH
A NEW CHEMICAL TREATMENT

Manufactured only by the

NATIONAL RING TRAVELER CO.
PAWTUCKET, R. I.
131 W. First St., Charlotte, N. C.
L. EVERETT TAYLOR, So. Agent

"NEW CARD CLOTHING Will *pep up* Our Whole Mill!"

A good superintendent knows that high grade carding means increased operating efficiency in every other department . . . he realizes the importance of getting production off to the right start.

With new Tuffer card clothing on your cards you will increase production and obtain the quality so necessary for strong, even yarns. You know this means increased output in the card room, spinning room and in the weave room.

Let a Howard Bros. representative inspect your card clothing. He is qualified to make recommendations that will improve production throughout your mill!

HOWARD BROS. MFG. CO.

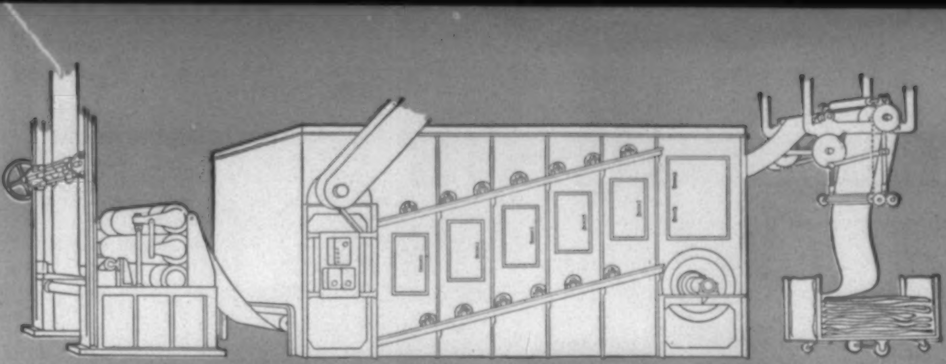
WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C. **Branches:** Philadelphia, Pa. and Blanco, Texas
Direct Representation in Canada

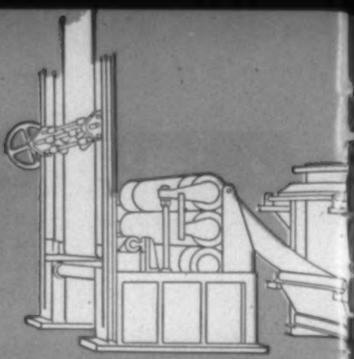
A-2

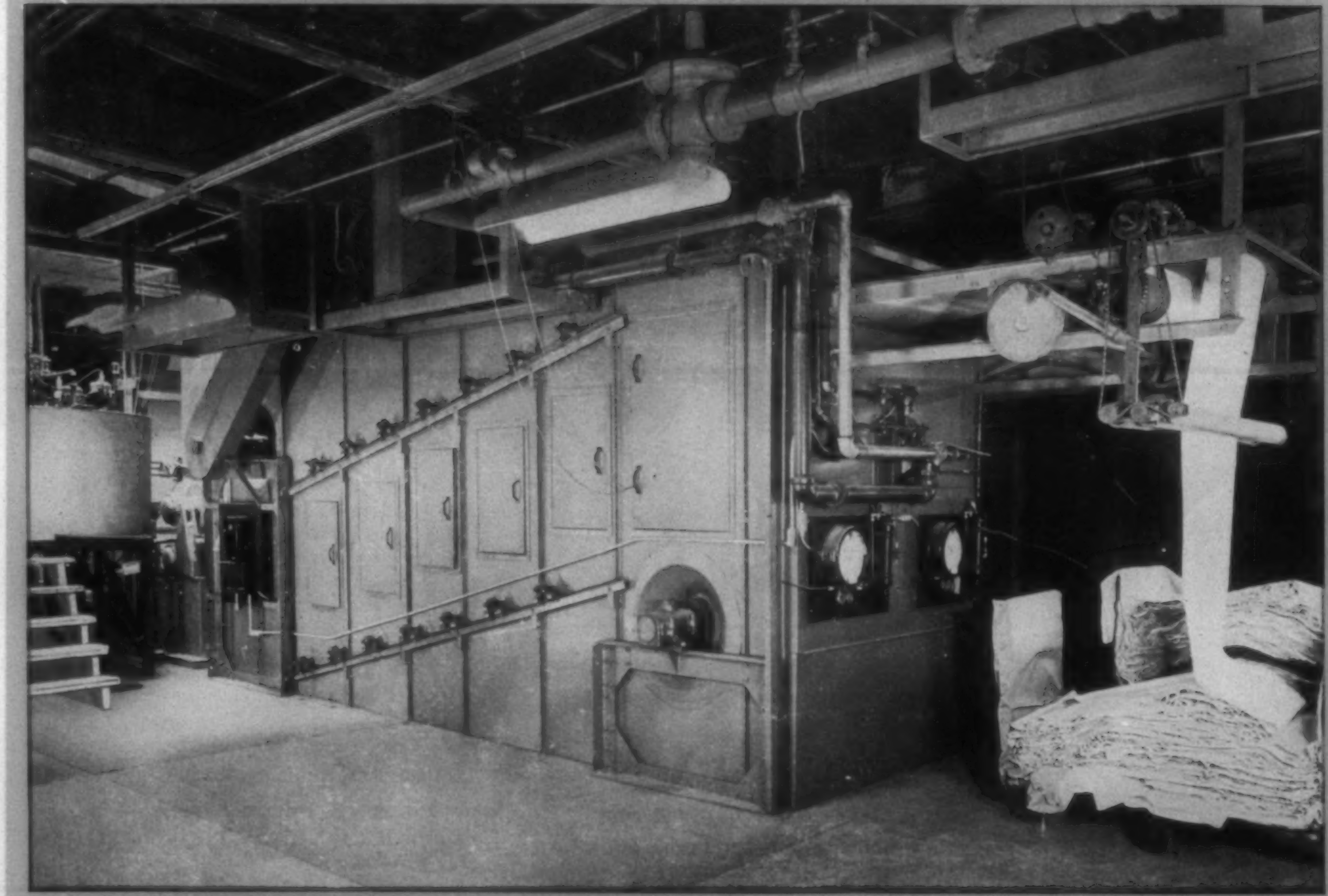
TUFFER CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

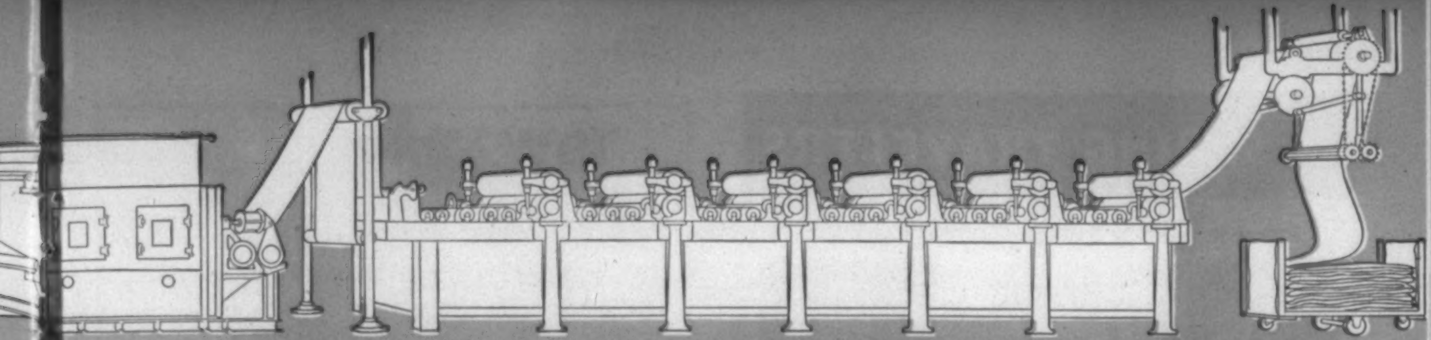


In the first section of the Butterworth Vat Dyeing Range, goods enter a 3-roll padder in which the color is applied in pigment form, followed by drying on a special type air-dryer and folding onto a hand truck.





Delivery end of Butterworth 2-roll pad and impinge dryer in Vat Dyeing Range. Accurate control of the air velocity and temperature in the impinge dryer eliminates any possibility of migration. Goods are dried to within 15-20% of the moisture content.



In the second section of the Butterworth Vat Dyeing Range, goods are impregnated with chemicals on a 3-roll padder and then enter a steamer. (Note choice of cloth entrance—at top for straight steam process or at bottom through a liquid seal for steam and liquid booster processes.) After steaming, goods pass through a water seal and squeeze rolls, and are washed in a 6-box washer, followed by folding onto hand truck.

FINER, FASTER COLORS AT LOWER COST TO YOU

A full range of vat colors, from pastel to very deep shades, can be applied continuously on the Butterworth Vat Dyeing Range. Improved appearance, greater color yield, fastness to crocking, washing and bleaching, as well as fastness to light are imparted to a wide variety of fabrics in either long or short yardages.

There are substantial savings, up to 25% in the cost of color application. Exhaustion problems are overcome. Seconds due to shade variations and specking are eliminated. Close shade control is obtained even in short runs. Liquid boosters can be added to meet specific mill conditions.

The Butterworth Continuous Vat Dyeing Range is designed to allow easy access for threading. Tensions are adjustable for various fabrics. Non-oxidizing metal is used exclusively in the construction.

The Butterworth Continuous Vat Dyeing Range operates at speeds up to 120 yards per minute for increased production. The controlled action of liberated "live" steam permits these speeds without effecting the chemical stability of the leuco.

Investigate the Butterworth Continuous Vat Dyeing Range. Write or call for detailed information.

Butterworth

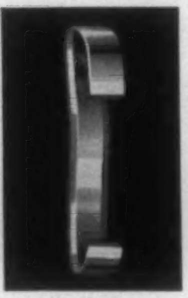
H. W. BUTTERWORTH & SONS COMPANY, Philadelphia 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N.C. W. J. Westaway Co., Hamilton, Ont. - ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pflieger & Co. - BOLIVIA: Schneiter & Cia., Ltda., La Paz BRAZIL: Cia. Industria e Commercio, Glossop, Sao Paulo e Rio de Janeiro - CHILE: Schneiter & Cia., Ltda., Santiago. COLOMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrull, Havana - ECUADOR: Richard O. Custer, S. A. Quito - FRANCE: Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: I. Slobotzky, Mexico, D. F. - MIDDLE EAST: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson, Goteborg - URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.

U. S. RING TRAVELERS

Bevel Edge

Bronze Travelers for WET TWISTING



Bevel Edge

U. S. Ring Travelers are made in every style and size for wet twisting on vertical rings. We supply all standard types. In addition, we make the exclusive Bevel-edge design, which we strongly recommend for certain kinds of work.

A Style and Size for Every Textile Fibre

"U. S." offers a COMPLETE Traveler Service — a complete line suited to every fibre and operation—complete engineering service assisting you in traveler selection and maintenance for maximum spinning and twisting production.

DEPENDABLE DELIVERY—PROMPT SERVICE CALLS

U. S. RING TRAVELER CO.
AMOS M. BOWEN, President & Treasurer
Providence, Rhode Island

"U. S." Men give you Prompt Service!

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O. B. LAND, Athens, Ga. . . . . . Box 1187—Phone 478
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ENDLESS BLANKETS
SLASHER JACKETS
ENDLESS REVOLVING CLEARERS

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Manufacturers of

All Type Fluted Rolls

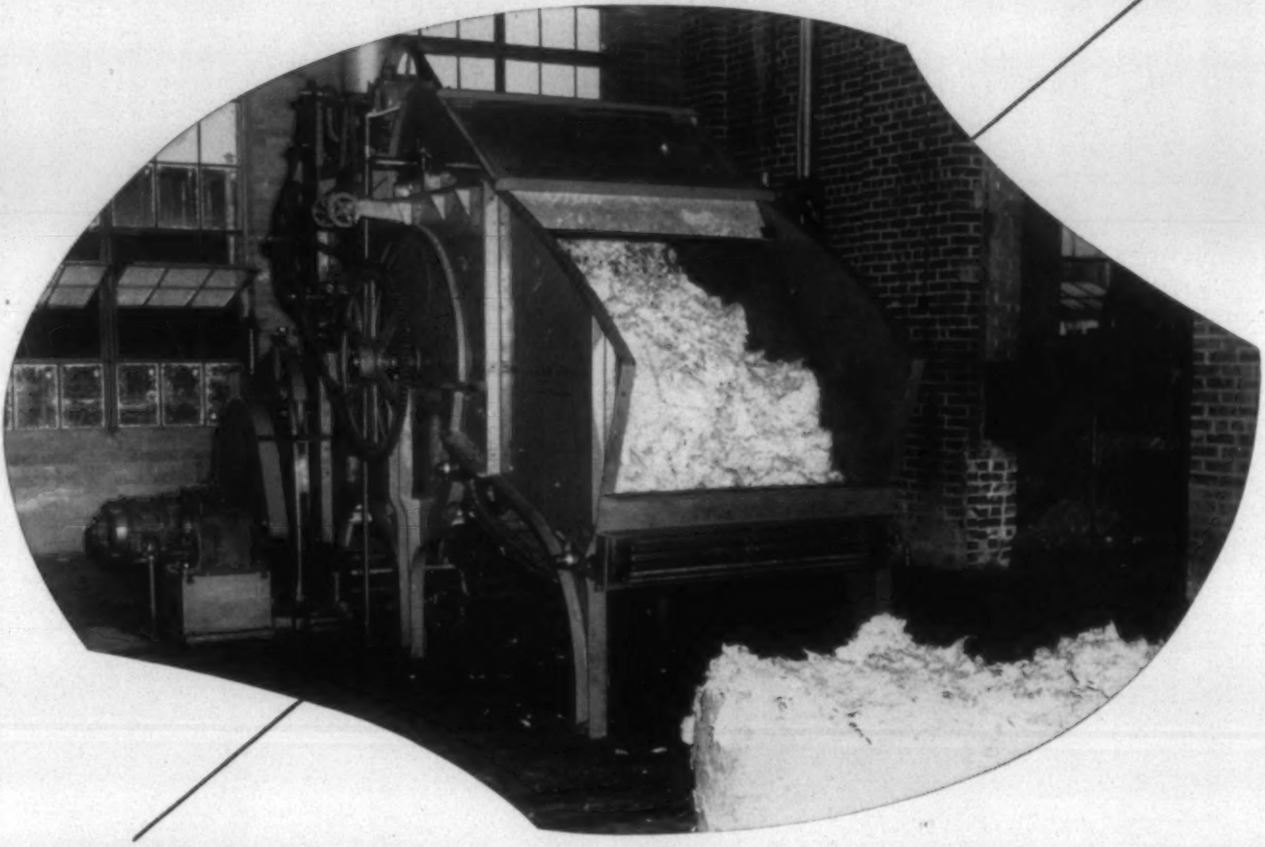
COMBERS – SPINNING – LAP MACHINES

DRAWING ROLLS A SPECIALTY

We also arrange present drawing frames for long synthetic staple up to and including three inch

Gossett Machine Works
West Franklin Avenue **Gastonia, N. C.**
Phone 213

The Answer to Better Extracting...



PROCTOR Continuous Extracting Unit for Raw Stock

Here are the highlights of the operation of this modern unit, which replaces the laborious intermittent method of centrifugal extracting.

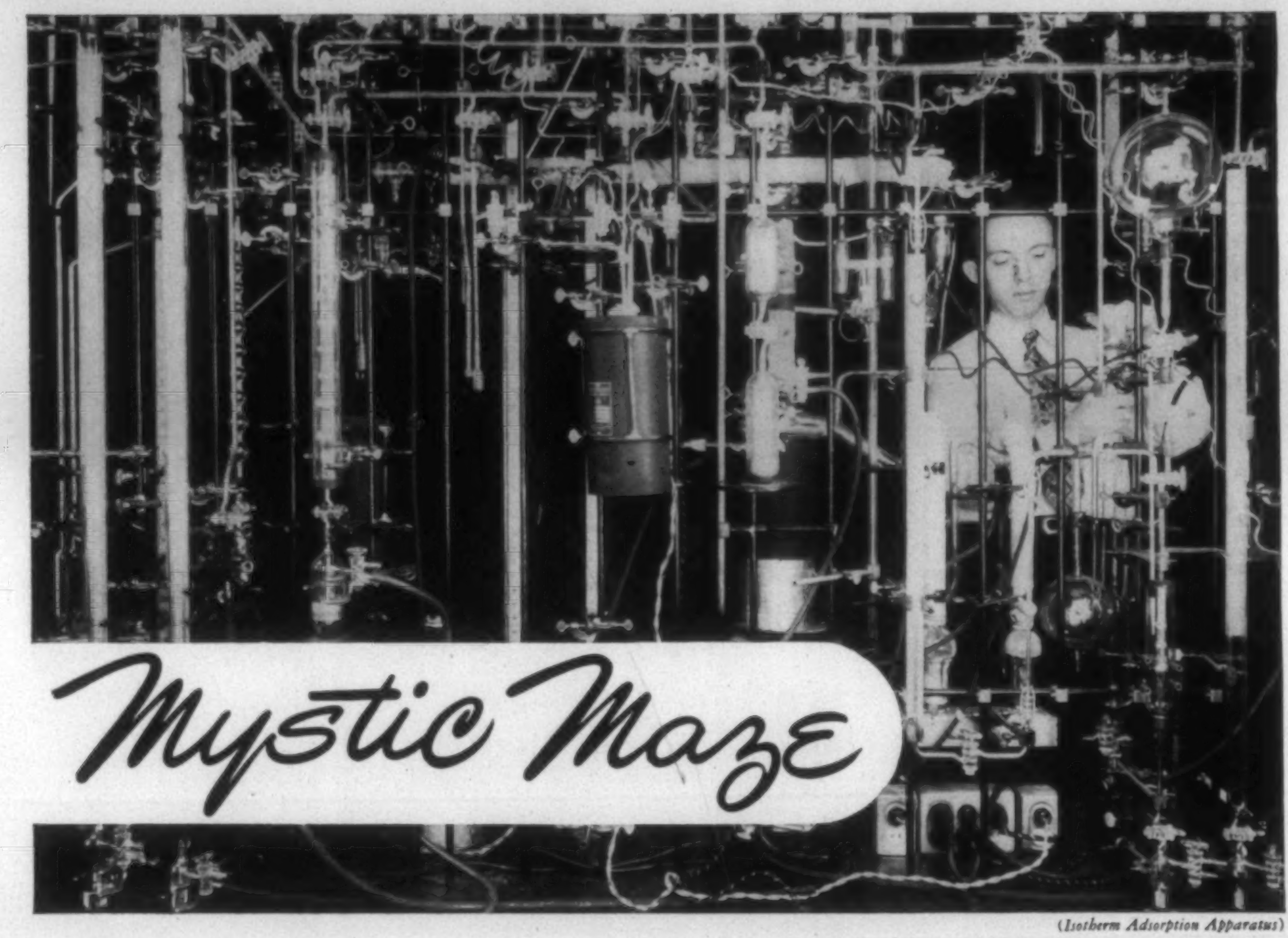
An automatic feed delivers a uniform amount of wet stock to the squeeze rolls. A vibrating plate, arranged between the self-feed and the squeeze rolls, feeds the layer of wet stock into the nip of the rolls in such a manner as to prevent droppage of wet stock or bunching of the material as it goes through the rolls.

Here are the results: There is better opening of matted stock . . . wet spots in dried stock are eliminated . . . production is constant and very high . . . time losses are virtually eliminated . . . operating costs are kept to a minimum.

The initial price of this modern Proctor unit is probably higher than that of any other extracting equipment made. However, when you consider that with it you can combine increased production with improved quality—it is obvious that the Proctor continuous extracting unit will pay for itself many times over. Even with the somewhat higher initial investment, viewed over the long run, Proctor equipment is actually the least expensive.

PHILADELPHIA 20, PA.

PROCTOR & SCHWARTZ
INC.



(Isotherm Adsorption Apparatus)

Mystic Maze

Seen through this mystic maze of tubes and wiring is a Sinclair Research technician. What his apparatus means to users of industrial lubricants is no mystery, however.

At Sinclair Laboratories, the Isotherm Adsorption Apparatus is used constantly to determine the effectiveness of adsorbents used in lubricating oil refining procedures. Because Sinclair lubricants are made with infinite care to suit the specific requirements of your equipment, it is highly important to know exactly how adsorbents, catalysts, and other treating materials perform in a refining process.

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textile bulletin

VOL. 72 JUNE 15, 1947 NO. 8

Education And Research Matters Taken Up At South Carolina Association Meeting

MEETING in historical Charleston, one of America's oldest cities, the Cotton Manufacturers Association of South Carolina at its annual convention June 5-7 looked to modern scientific research and production methods to bring increased prosperity to an industry that has made remarkable strides during the past 25 years. Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, cited the impressive gains made by the cotton textile industry in the last decade in the fields of public and labor relations, research and technology, and told association members that the industry has long since reached the position where it need not apologize "for any aspects of its operations or philosophy."

In this respect plans were laid for intensified work in expanding the J. E. Sirrine Textile Foundation. It was reported that approximately $840,000 had been raised, the income from which will be used largely in expanding textile education facilities at Clemson College, Clemson, S. C., and immediate plans are to raise the fund past the million dollar mark. Referring to the Institute of Textile Technology at Charlottesville, Va., Dr. Murchison predicted that within another five years he believed that institute would be recognized as one of the greatest research and educational institutions in America. Great strides have already been made in this direction, he revealed, adding that one of the greatest groups of scientists in the world have been assembled to comprise part of this organization.

Lawrence O. Hammett of Orr Cotton Mills, Anderson, and Chiquola Mfg. Co., Honea Path, was re-elected president of the association at the closing session. In his annual address as president, Mr. Hammett stressed the importance of increasingly close co-operation between the American Cotton Manufacturers Association and the state associations of mill executives. This policy of handling regional and national matters with and through the American Association has been found to be the most effective approach, he observed.

Dr. William P. Jacobs, president of the American Cotton Manufacturers Association, warned the South Carolina group that it must be prepared for the most intense type of textile competion from many parts of the world after those industries get into full production. Dr. Jacobs said he was confident about good business for the immediate future but expressed deep concern about the international competitive situation which is developing. The State Department, he declared, is encouraging other countries to rehabilitate their textile industries. "There has also been a turn-about on protective tariffs," he said. "Some of the old-time proponents are now for free trade. The cotton growers now appreciate the importance of protecting domestic mills but the cotton shippers do not yet take this position. Thus, the mills, together with the labor unions, have the major part of the effort to insure a program that will not permit a return of the kind of competition which the Japs gave before the war."

Dr. Jacobs spoke strongly against lending of American money to build up dollar credits in foreign countries, pointing out that "even if other nations have no dollars with which to buy our products we cannot build a permanent or profitable market by lending or giving them dollars. Even the United States is not wealthy enough to finance the whole world," he added, "but we do have enough money to prevent domestic depression and that is exactly what we should do. We cannot talk ourselves into a depression when money does the talking."

For every thousand dollars spent on research before the war, Dr. Murchison revealed, the industry now is spending a million. As examples of the vastly expanded interest in research, he cited the foundations established in North Carolina, South Carolina and Georgia by mill contributions which now amount to several million dollars. The industry is contributing $200,000 annually through its five cents a bale campaign in research and promotion and is co-operating closely with the National Cotton Council in these fields, he pointed out. Cotton mills are contributing much to the economic welfare of the cotton farmer by encouraging mechanization of agriculture, he said.

The physical organization of the industry has been greatly improved through the so-called "vertical integrations" accomplished in the last several years, Dr. Murchison further declared. Contrary to many false impressions, these integrations, he asserted, do not in any way represent a trend toward monopoly or to large formations just for the sake of large units. "Vertical integrations in cotton textiles," he concluded, "represent an effort to provide with single management a wider range of products and better balanced production schedules. As a result, the general public will be rewarded with higher quality products and inevitable lower prices."

Gov. J. Strom Thurmond of South Carolina, guest speaker at the association's banquet, paid tribute to the textile industry and urged the manufacturers to take advantage of expanded port facilities in Charleston, scene of the meeting.

Other officers of the association in addition to Mr. Hammett, president, include John K. Cauthen, who was re-elected as executive vice-president and secretary-treasurer of the group. J. B. Harris of Mathews Mill, Greenwood, was elected second vice-president.

Directors were named as follows: three years—Robert E. Henry of the Dunean, Watts, Aragon-Baldwin Mills and Victor-Monaghan Co., Greenville; Walter S. Montgomery of Beaumont, Spartan and Startex Mills, Spartanburg, and Samuel H. Swint of Graniteville Co., Graniteville. F. E. Grier of Abney Mills, Greenwood, was named to fill the unexpired term of J. B. Harris on the board and W. A. L. Sibley was named to fill the term of George Wright, retired. Mr. Wright was named a life member of the board of directors.

Mr. Wright, who retired some months ago as president of Republic Cotton Mills at Great Falls, was honored further by being named president of the J. E. Sirrine Textile Foundation, which held its annual meeting June 5 in Charleston. Mr. Wright succeeds Robert H. Chapman of Inman and Riverdale Mills, Spartanburg, who became vice-president succeeding Richard W. Arrington of Union Bleachery, Greenville. John K. Cauthen of Columbia is secretary-treasurer of the foundation. Trustees of the foundation remained unchanged and are as follows: R. E. Henry, Greenville; J. E. Sirrine, Greenville; S. H. Swint, Greenville; S. H. Lander, Anderson; W. S. Montgomery, Spartanburg; C. B. Hayes, Lyman; William P. Jacobs, Charlotte; B. F. Hagood, Easley; W. A. L. Sibley, Union; R. W. Arrington, Greenville; C. B. Nichols, Anderson; R. H. Chapman, Spartanburg; W. H. Beattie, Greenville; George M. Wright, Abbeville, and L. O. Hammett, Anderson.

S.T.A. Has Final Spring Divisional Meeting

THE spring meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association was held in the Central Y. M. C. A. Building, Spray N. C., on Saturday morning, June 7, with approximately 110 textile plant operating executives in attendance. J. B. Powell of Erlanger Mills, Inc., at Lexington, N. C., presided as divisional chairman. Addresses made during the meeting by Raymond E. Henderson, Schoolfield Division manager for Dan River Mills, Inc., Danville, Va., and Dr. William McGehee, director of personnel research for Fildcrest Mills, Spray, are published on this and following pages.

Production Vs. Living Standards

By RAYMOND E. HENDERSON

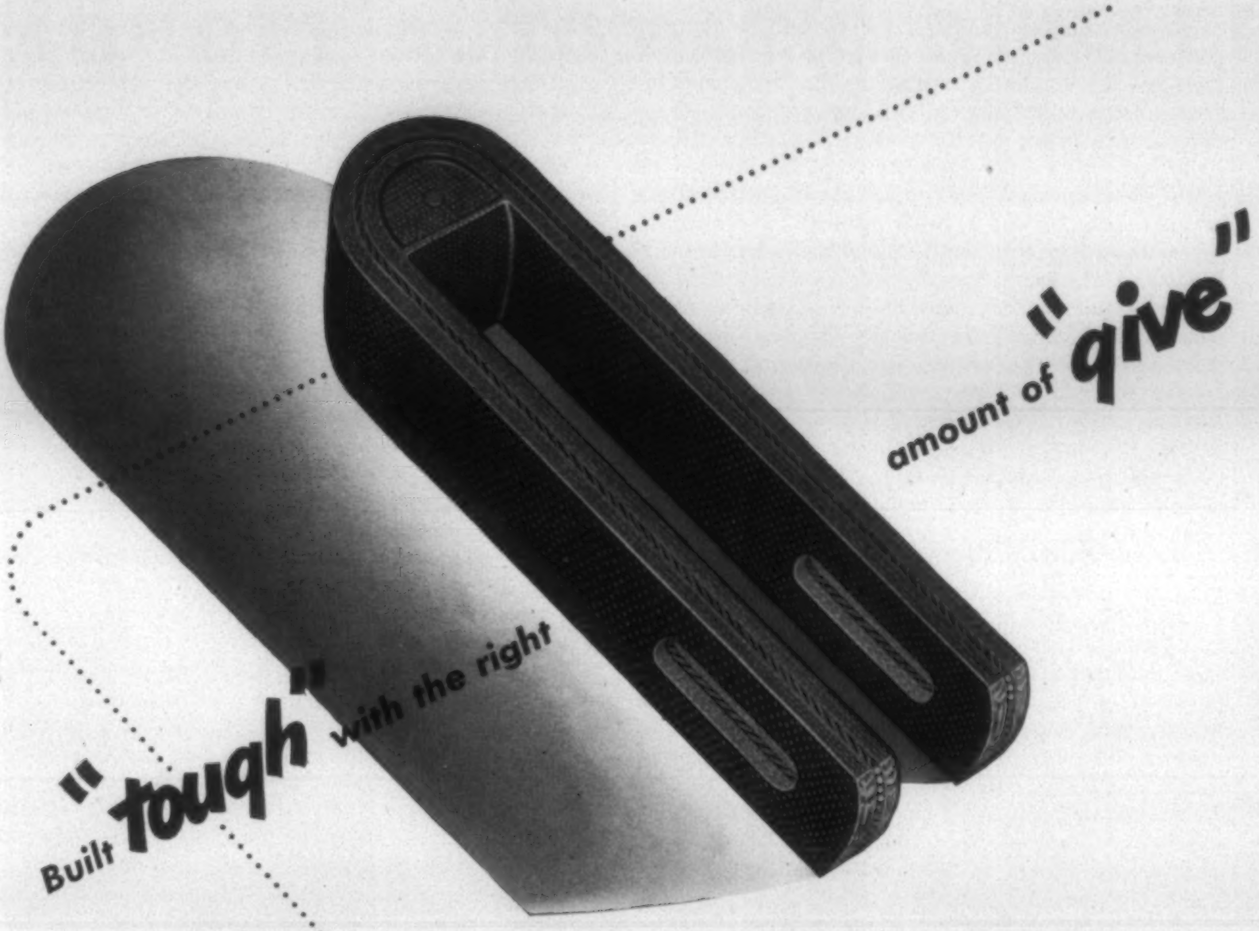
AMERICA is today and has been for many years the land of promise for people all over the world. Millions of them dream of some day coming to our country where they can make a better life for themselves and their families. Among the hordes of the poor and the depressed in other lands there is a great yearning to leave behind the poverty, tyranny, and oppression and come to our country where they have an opportunity to bring up their families without these fears.

This raises the question as to why our land is so much favored over most other countries of the world. Some people say our way of living is the result of our great natural wealth and resources. Others say it is the political system of freedom and democracy under which we live that provides an opportunity for every person to rise to the limit of his ability. Still others say it is the result of courage and hard work and a willingness to take a chance which is a heritage from our pioneering forefathers who were themselves rugged individualists and who came to a wild untamed country where they hewed out for themselves a way of life entirely different from the one they had left.

Regardless of the reason for our favored position over most of the other parts of the world, there is one thing on which I believe we will all agree. Our industrial system has contributed mightily to the ever increasing standard of living of all the people in our country. Our industries have forged the tools and turned out an ever increasing amount of production as the years have gone by for the enjoyment and comfort of all of our people. It demonstrated its might dramatically during the war that has just ended. Starting from nothing, within the space of three years, we produced ships, planes, guns, and many other items in stupendous quantities to equip our Army. Not only did we equip our own forces, of some 12 million men, magnificently with every known device for fighting a war, but we supplied untold quantities of armaments and materials to our many allies. But for this tremendous productive capacity which overcame our enemies and astonished the whole world, this war could not have been won.

Probably the most important example of our continued improvement in the way of living for all our people is the comparison in the weight and size of the average soldier in this war as against the first world war. The men who fought the last war were generally the sons of the men who fought the first war. Yet the average soldier in the last war was three-fourths of an inch taller and ten pounds heavier than the average soldier in the first world war. This is a significant fact and illustrates better than any way I know the results of our industrial system. Because of the ever increasing productivity per man hour brought about by improved machinery and methods, the hours of labor per person were reduced. Earning power was greatly increased. People ate more and better quality food. Young children could have more milk and other needed foods for healthy growth. Women in pregnancy generally received better medical attention because of increased purchasing power. The farms of our country during the war, with greatly reduced manpower, turned out crops such as never had been turned out before through the use of machinery and improved fertilizers and soil study. Most of these things are either direct or indirect results of the steady improvement and development of our industrial system.

These things lead us to one conclusion that is clear and irrefutable. That fact is; these goods things of life can come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to the people in our country as a whole only in exact proportion to the productivity per man-hour. This is an immutable law that cannot be changed by the president of the United States, the Congress, the Supreme Court, or any other human agency under the sun. If we continue in this country to increase the productivity per man-hour by the further development of tools and machines, by the increase of labor-saving devices, by better methods and the employing of new techniques and technologies, our standard of living will continue to improve and all of our people will have more and more of the good things of life from year to year. If productivity per man-hour decreases through the restriction of these devices and the restriction of production by artificial means, as some people are trying to do, then our standard of living will begin to decline and nothing can stop it.

Let me illustrate in another way. All of us have read and heard of the plight of the English. Last winter there was a crisis in the mining of coal in England which stopped off many industries for several weeks. Many thousands of people were out of work, were cold and miserable and uncomfortable. No doubt, a great many died as a result of this shortage of coal. No doubt, many children were born under these adverse conditions and their growth, mentally and physically, was hampered. The situation as for the coal in England is only one of the problems they have. We heard more of this problem than any other because it came so suddenly and with such serious consequences. Right now the English are suffering for many of the necessities of life and they have virtually no luxuries such as we know in this country. It all stems from the same source.

For 30 years the English have practiced the foolhardy program of restricting productivity per person in all of their mines and industries. They did this with the plea that it was the only way they could keep all of their workers occupied. Nothing could be further from the truth. In England today a coal miner produces one ton of coal per day. In our country a miner gets out 5.1 tons of coal per day. In England for 30 years they have not been allowed to introduce new machinery, labor saving devices and improved methods. They still mine coal with pick and shovel, grubbing it out of the ground in the primitive fashion with hard, backbreaking labor. In our country, we have equipped our mines with machinery, labor-saving devices, improved methods and have kept up to date as the years have advanced. Our miners do less actual physical labor to produce over five tons of coal per day than the English miner does to produce one ton of coal. Because of this lower production, it is impossible to pay the English miner more than a fraction of what our own miners are paid. At the same time and for the same reason, the price of coal to the consumer is so expensive many people cannot buy coal and many others cannot buy as much as they need. This one condition affects the health, life and comfort of the great bulk of the English people.

This is one example of their difficulties. Another is the way they run their textile mills which comes closer home to us in this group today. In England the weavers are restricted to four to six looms each, regardless of the fabric. Consequently, they have no automatic looms because it does not pay a mill to put them in since the weaver is not allowed to run more than six looms. Spinners are restricted to four to six sides of spinning and other work in the mill is on the same basis. Consequently, it requires two to three times as many people in the English textile mills to produce the same amount of cloth in the same quality as it does in our mills. And here again as in the coal mines, the workers can be paid only a pittance as compared to our textile workers, and yet the price of cloth is high because of the great amount of labor that goes into the manufacture. Most of them cannot afford to have anything like as much cloth as they need for their various uses. Furthermore, they cannot compete with our country and other countries which produce goods at a much lower cost.

The tragic part of this story is that the very people whom the politicians and others in power claim to protect are the ones who are now suffering most from these foolhardy practices. The poorest and lowest paid people are hit the hardest because their wages are low and what little money they do make buys such a small amount of the high-priced goods.

We are suffering in our country right now to some degree from the same thing as the English. Many people here are trying, by all means in their power, to force us to the same wicked and iniquitous practices in our industries. Due to our country's wealth and natural resources, we have not suffered any major calamity from these practices yet, but if it continues and becomes more widespread, it will do the same thing to us in time as it has done to the English. If we had followed the same practices for the last 30 years as the English have followed in restricting production, we would be in their condition. Furthermore, our chances for winning the last war would have been greatly reduced. In fact, I doubt if we could have won this war under these conditions. With no intention of robbing our fighting men of the credit for a magnificent job, this war was won by the side that had the most ships and planes and guns and the many other thousands of items needed to fight a war.

If we do not avail ourselves of every known device and are not diligent in seeking every known improvement for increasing productivity, our economy will remain static to say the very least and will very likely begin to crumble. When that happens, we will lose our dominant position in world affairs and our country will be wide open to the invader who will not hesitate at invasion if they think they have a chance to subdue us.

Textiles and related businesses in our country employ more people than any other business in this country. This group today represents an important segment of that tremendous industry. We have a responsibility of major importance laid on us for continuing to improve the living standards of the people in our country. If we do not avail ourselves of the latest methods, techniques and devices, for continuing to increase the productivity per man, we are not doing our duty to our country, our communities, our workers, and our employers.

Vocational Education For Textile Supervisors And Workers

By DR. WILLIAM McGEHEE

I HAVE spent all my life in some aspect of training. I taught in the public schools—taught Latin—and incidentally, had much less success in teaching Latin than in teaching football. I taught psychology for several years and finally got one student who could spell the word. Then I

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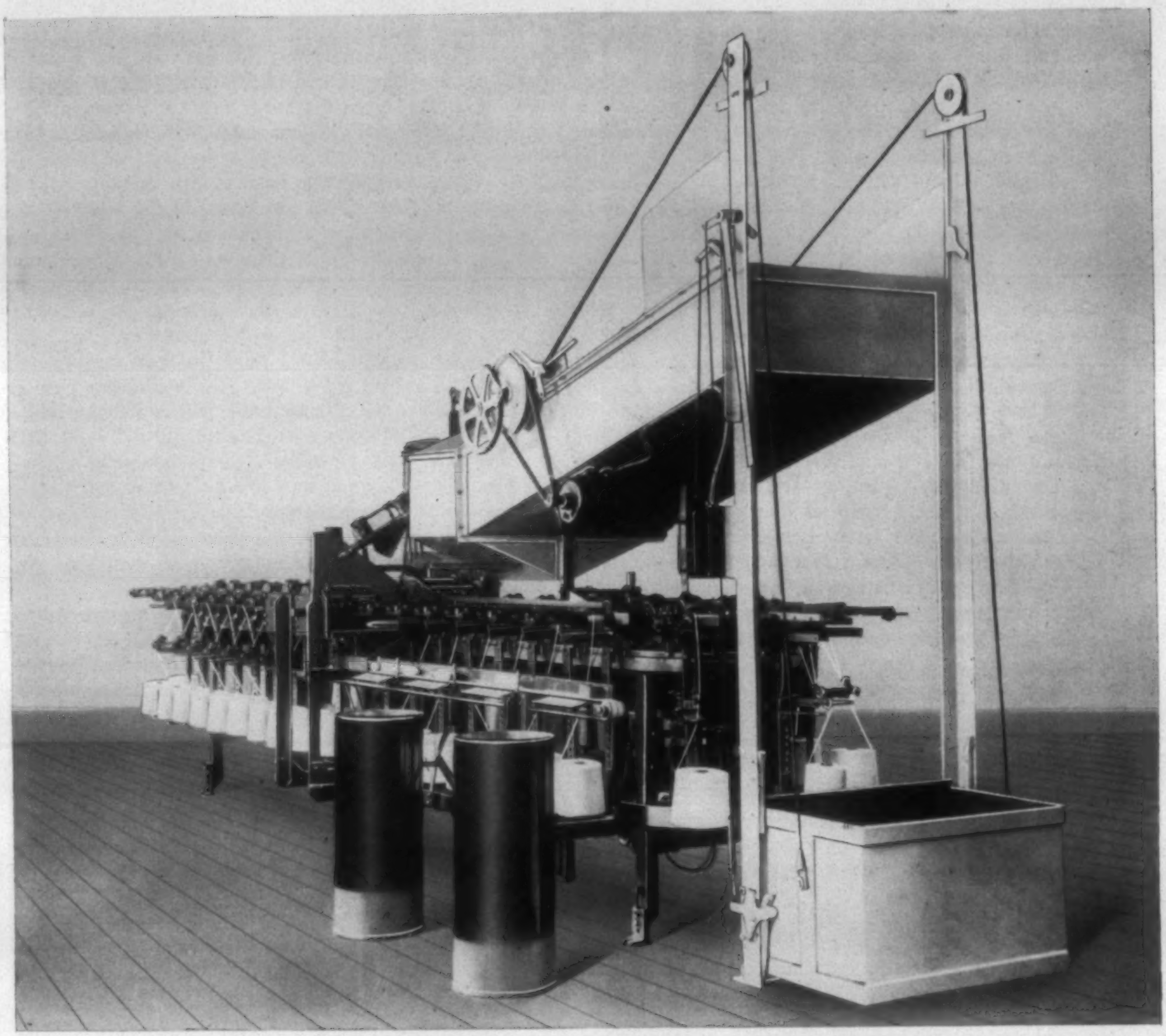

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spent some time in the Navy, teaching pilots some aspects of instrument flying. It is because of that experience that I feel even at all qualified to talk to you. What I am going to do is to try to synthesize and bring together some of the things I have found out in the public schools and in college about teaching and tie them up, if I can, with what I am learning about training in industry. The things that I am going to try to present to you are some thoughts and opinions and some tentative conclusions to which my brief experience and contact with industry have led me. I say they are tentative. I hope very much that when I am through talking you will ask questions and that you will criticize these remarks, for the simple reason that I am hoping to get as much out of this as you are.

The first point I want to make in this synthesis is that I am convinced that those of us who are concerned with training in industry can get much of value from the literature on experimental investigations of learning that has been developed in the last 30 or 40 years. There is an extensive amount of it. I have a book in my library on the nature of learning. In that particular book there are listed the titles of over 300 articles that have been written on the experimental nature of learning—articles written in the last few years. Admittedly, many of those articles have little value to industry. For instance, I have seen one article with the title "Maze Learning in a Gold Fish" and another on "Goal Behavior in a Caterpillar," which obviously would have no bearing on your problems of training. But in these articles there are many on studies which have been made which are directly pertinent to industrial situations. I am not going into those articles in detail, but I should like to bring out facts which have been proved in experimental situations in the public schools and in psychological laboratories and which I think are, in my observation, directly pertinent to the planning and working out of industrial studies.

The first point to which I wish to call your attention is the importance of motivation in learning. In other words, your worker is not going to learn unless he wants to learn. We have to set up our situations in training in such a way as to enlist his interest in what he is learning. It is a well proven fact that we can get more out of a person by praising him than by blaming him; we can get him to learn better. It is also a well known fact that you have to vary the type of incentive that you use for learning. If you praise a man continuously he will get used to praise, and it will slide off his back. If you blame him continuously you have the same result. So the first point is that you have to make the fellow want to learn.

Meeting of Northern North Carolina-Virginia Division of Southern Textile Association at Spray, N. C., June 7.

The second important fact that has come out is that in order for a person to learn efficiently he has to be properly guided, particularly in the initial stages of learning activity. I do not know whether you realize it or not, but a man learns the incorrect response in a situation just as well as the correct response. You learn to slice on your drive in golf just as you learn the correct way of driving, and with the correct instruction in the beginning you might have been able to eliminate that slice. The same thing is true in any situation—in industry, school, sport. The individual has to be given the correct way in the beginning; we should not wait until he has established inadequate habits.

The third factor, which I think has been largely overlooked in the industrial situation, due to the exigencies of that situation, is the time element. It is admitted that if it takes 20 hours to teach a man something he will learn much more quickly if you teach him in five four-hour bits than in two ten-hour bits or in one 20-hour period. Admittedly, that is difficult to do in industry. You have the man in there for eight hours a day. But I believe that you can switch your man around and use him in some other way after teaching him for, say, four hours.

Next is the skill of the teacher in using different methods of presentation—visual aids, demonstrations, careful planning. A poor teacher can do more harm sometimes than no teacher at all by not clearly and carefully presenting what he is trying to get over. Another point that has come out in these numerous researches is the importance of the individual's knowing why he is asked to do something. How many of you, in instructing a worker, say "Go over there and do so-and-so" and never tell him why you want it done? I saw a cartoon in the newspaper the other day showing the Bull of the Woods running hell for leather to the shop. When asked why, he said: "I told the guy to make the new piece exactly like the old one." Another man said: "But you didn't tell him not to make the hole in it egg-shaped. The old one was egg-shaped from being worn." If he had just told the man why he wanted it done a certain way he would have gotten it that way. Tell your fellows why you want certain things done. Admittedly that takes time, but you save time and worry in the end.

The next point of importance is that of tacking on to what a man already knows the thing you are trying to teach him. I had a student once, a few years ago, who could not understand one of the laws of chemistry about the expansion of gases. I was not teaching chemistry at the time, but he came to me for help. It had never occurred to anyone that you could teach that in the terms of the behavior of an automobile tire in hot and cold weather, instead of talking about co-efficients, etc., etc. You have to bring it down to what the person already knows.

Those are some of the points that have been worked out in studies—not in industrial situations, but they are applicable to industrial situations. I am only asking you to try them out when you are setting up your own experimental situations. That is one thing I think that we have to come to in the textile and other industries—actual experimental work on training. Some say we have not time. I say we have not time not to. We can waste more time and money

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in using inefficient systems of training than by experimental work. What is the best way to train a weaver, by vestibule training or on the job? You may have opinions, but who knows? What is the value of moving pictures in training? Another question (and I do not know whether we have the answer yet) is, who should train? Should we have special instructors whose sole job is training in industry, or should we rely on the best worker? What is the optimum point for cessation of training in any given type of industrial activity? How long does it take to make a weaver? How long to make a spinner? When should we quit training—the formal types of training? I doubt very much if we have an answer to those questions. Certainly I do not know.

Let's go on from that and take the problem of training supervisors. Are lecture methods a good way? We say they are not. Is the conference method a good way? We have never set it up and tried it out. I say to you that if we are going very far in training for industry we have to get the answers to these questions, and the only way to get them is to set up experimental methods and try them out in carefully controlled situations.

I have said that we take methods learned in fields other than industrial. We should also do experimental work in trying to find out whether they are good for industry or not. Also, we have to adapt any program of training to the needs of our own particular mill; we have to tailor-make it for Dan River Mills, for Fieldcrest Mills, instead of going out and buying canned programs. I have absolutely nothing against correspondence courses, but I have to swallow a whole correspondence course as the sole method of training our supervisors here. I have looked over a good many of them in the last six months. Some of them have something good in them, and I want to pull that out. Some have something poor in them, and I do not want any of that. You have to take them and tailor them to your particular needs, so you must know what you need. We are attempting to do that here in Fieldcrest—find out what we actually need in supervisory training. We are doing it by studying with our foremen to find out what are their actual training needs. We hope to find out in ten years or so.

Another thing in connection with training is that the ultimate responsibility of training must lie upon line supervision and not on the staff. The people in the staff are not the people to do the training if we are to have good training done. You men who are foremen and assistant foremen are the fellows responsible for getting production, not the training officer. You are the fellows who ultimately will have to do the training. In the second place, the best way in the world to prove yourself is to train someone else.

As I see it, the staff officers can function only in the following ways: (1) in organizing routines of training and scheduling; (2) furnish training aids and materials—perhaps supply them to you, but certainly suggest them to you; (3) compile records of training; and (4) help you evaluate your training. I do not mean that the foreman in the weave room should be a statistician; Lord help the weave room if he is. But certainly the training people should be able to help you evaluate your system. Then occasionally they may help you to teach specialized subjects, and I think the less they do of actual teaching the better the training program will be. But the primary job is your job, the job of you men on the production line. It is your job to see that the training program is adequate.

Officers of the Northern North Carolina-Virginia Division, S. T. A., left to right: J. G. Shedd, Dan River Mills, Danville, Va., vice-chairman; Howard Barton, Fieldcrest Mills, Spray, N. C., secretary; and J. B. Powell, Erlanger Cotton Mills, Lexington, N. C., chairman.

Another point that has come to me in thinking this over is the importance of the proper training of instructors. You supervisors certainly have to teach at the assistant foreman level. You have to get the word across to the people who are under you. Many of these people have a natural aptitude for that, but I think we can help them by setting up training courses; in other words, courses in training instruction, in the use of visual aids, etc.

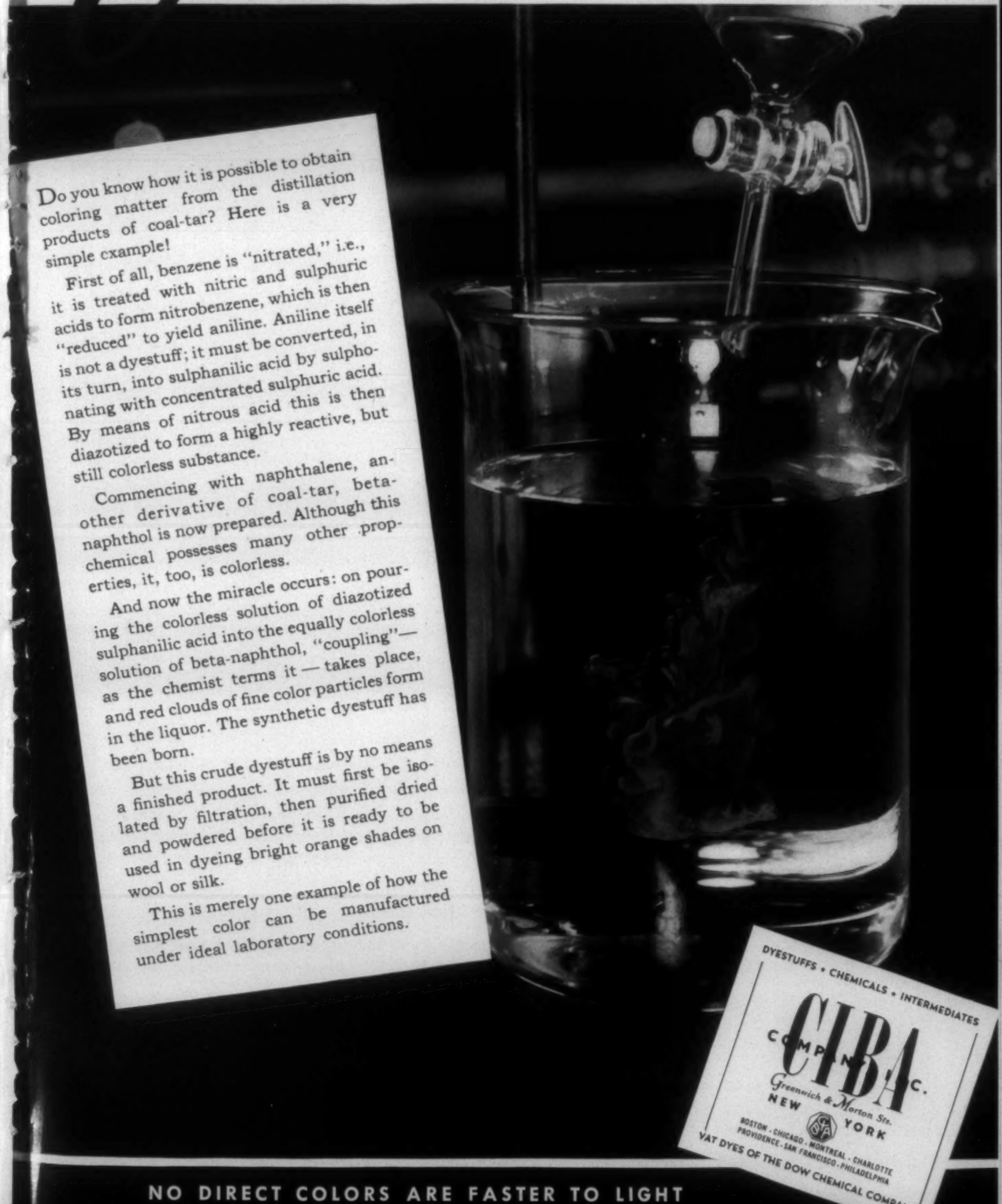
Along that line, if you are going to use production workers as trainers, I think after carefully selecting them you are going to have to make it worth their while both financially and in the way of social prestige. If your top weaver becomes an instructor and his production falls off on account of it, he is going to neglect the learner to turn to his weaving unless you make it worth his while financially to do the training. Then, teaching is not an easy job, and you have to give your trainer some status to make him keep his job of teaching; you have to see that he has some prestige.

Next is the matter of records. We have to evaluate the trainee's progress. If you could study the records of your training from day to day you could find the learner's weak points and his strong points. If he has some weak point, some sloppy performance, you can correct it. You can see his learning progress and get him to improve it from time to time. These records are necessary in order for us to evaluate our training procedure. Recently I read an article about a training program set up to teach certain workers the easiest and quickest way to change knives in a moving pair of shears. Prior to the use of the training program it took a man 27 minutes to change the knife. The training reduced the time from 27 minutes to 12 minutes, and there was a worthwhile saving in actual production costs over the course of a year.

I think training records can be used to predict the ultimate level of achievement of your worker. People do not work at the same level. If you have a person on your payroll for six or eight or 12 months there is some obligation, moral if not contractual, to keep him if he does a reasonably good job. But if you study his records during the first month or two months you can predict whether that person will be a good worker or a poor worker at the end of six months. You can predict whether he will ever get up to satisfactory production. In other words, we need records and need to analyze those records.

Another point I want to make is that it is necessary in the industrial world to keep on training. One thing struck me very forcibly in my college and school work—we had a termination point. We brought the boys up to where they got a B.S. or a B.A. and then turned them out. They became your headaches. I think one reason you say certain courses are no good is that you give them once and then do not give them any more. But *(Continued on Page 63)*

Ciba DYESTUFF GLIMPSES



Do you know how it is possible to obtain coloring matter from the distillation products of coal-tar? Here is a very simple example!

First of all, benzene is "nitrated," i.e., it is treated with nitric and sulphuric acids to form nitrobenzene, which is then "reduced" to yield aniline. Aniline itself is not a dyestuff; it must be converted, in its turn, into sulphanilic acid by sulphonating with concentrated sulphuric acid. By means of nitrous acid this is then diazotized to form a highly reactive, but still colorless substance.

Commencing with naphthalene, another derivative of coal-tar, beta-naphthol is now prepared. Although this chemical possesses many other properties, it, too, is colorless.

And now the miracle occurs: on pouring the colorless solution of diazotized sulphanilic acid into the equally colorless solution of beta-naphthol, "coupling"—as the chemist terms it — takes place, and red clouds of fine color particles form in the liquor. The synthetic dyestuff has been born.

But this crude dyestuff is by no means a finished product. It must first be isolated by filtration, then purified dried and powdered before it is ready to be used in dyeing bright orange shades on wool or silk.

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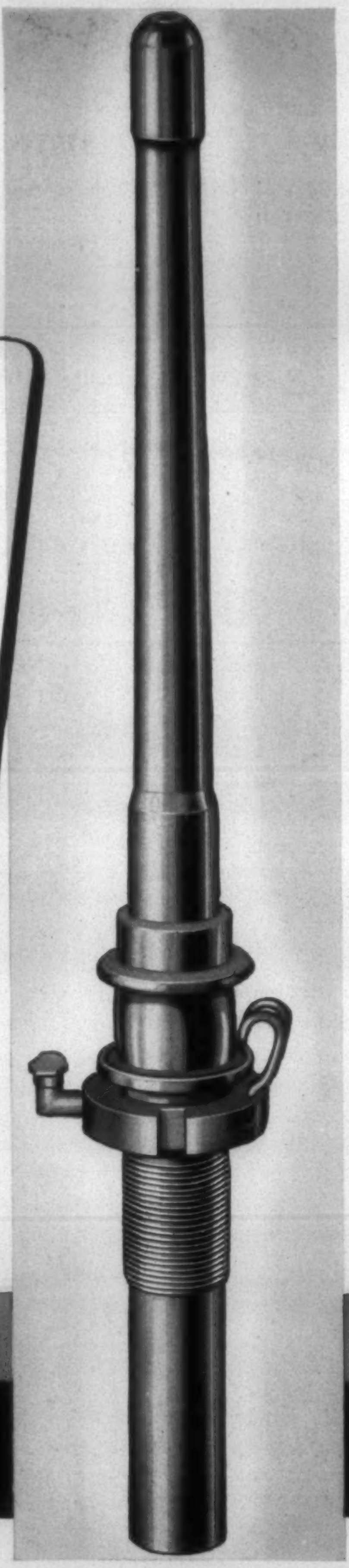

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Integration Of Sciences In Textile Research

By S. JACK DAVIS, Research Division, Callaway Mills, LaGrange, Georgia

TEXTILES to some may mean simply clothing, but the field is far greater than this restricted use. Textiles in the form of tents provide shelter from the elements, textiles in the form of conveyor belts provide means of transporting materials, textiles imbedded in rubber tires meet the requirements of flexible structural material, textiles wrapped around conducting wires provide satisfactory electrical insulation, textiles in the form of rugs afford resilient floor covering, textiles in the form of towels absorb water from the body, textiles combined with plastics in laminates make silent gears, and so on and on one might account for the engineering uses, as well as the decorative uses, of textiles. When one is confronted with such an extensive catalog of the end uses of textile materials, it is necessary to realize that these various end uses make widely varying demands upon the textile materials. As our knowledge of the fundamental properties of the textile material increases, we may confidently expect that the existing end uses will be more adequately served, and new ones discovered.

The fundamental unit comprising a textile raw material is the fiber. Fibers may be long or short, they may be thick or thin, they may be strong or weak, and they may be stiff or they may be resilient. Fibers may be derived from a wide variety of natural sources or they may be manufactured by man, either by regenerating naturally occurring materials or by synthesis from simpler materials. Even in spite of fibers from glass, from naturally occurring asbestos, and from certain metals, by far the greatest volume of fibers in commercial use today are organic high polymers. If we are to understand the best textile materials for a given end-use, it is necessary that we have a fundamental understanding of the intrinsic building block of that material, namely the fiber. Here it is that the physicist and the chemist and the biologist take over and have a field day. In the background, of course, is the agriculturist and hovering above it all, like the specter of death, is the economist.

I would like to classify for you the types of fiber in commercial use today. First of all, under the general classification of cellulosic fibers, is that grand old product of the South which has been called King Cotton. Flax and ramie are naturally occurring cellulosic fibers used in small volume. Also in this classification is the so-called synthetic, rayon. Viscose rayon is not a synthetic in the strict sense, since it depends upon a natural source of cellulose as raw material. Cuprammonium rayon is a similar material, differing only slightly from viscose in its physical and chemical properties and also being a regenerated cellulosic fiber.

The next class of fibers could be the cellulose derivatives. Of course, only cellulose acetate has reached any commercial importance. Another general classification would be the naturally occurring protein fibers, including wool and other hairs.

The next classification could be the regenerated protein fibers, known generically as the azlons. Although this class has not as yet been commercially important, very rapid progress has been made recently in the technology of these fibers. Fibers are made by dissolving the protein from natural sources and regenerating them in an acid bath. The type of fiber produced is dependent upon the source of the protein, and perhaps the most familiar to you are those fibers made from the casein of milk, sold commercially under the trade name of Aralac. There are fibers also from soy bean protein and from peanut protein.

The next classification I would propose would be the pure synthetics. Under this classification would fall the fibers made from polyvinyl chloride-polyvinyl acetate copolymers and known commercially as vinyon, and of course the grand fiber recently glamourized, and justly so, by its manufacturers—nylon.

Finally, I would suggest a combined classification of the inorganic fibers. Those of commercial importance include those from asbestos, a mineral which is fibrous in character, fiberglas, a fiber drawn from molten glass, and metallic fibers, such as steel or aluminum.

What do we need to know about fibers? From the physical point of view, we need to know something of their strengths per cross-section unit area, we need to know their elongations under loads, we need to know the recovery from load, we need to know whether they will flex or not, we need to know whether or not they will shrink with moisture, we need to know their dielectric constants, we need to know their efficiency as thermo-insulators, we need to know their average cross-section diameter, and we need to know the distribution of fiber length—to mention only a few of the more important physical properties. From the chemical point of view, we desire to know the behavior of these fibers with respect to acid or alkali, with respect to heat, light, or other deteriorating influences, with regard to their water absorbing or repelling properties, their property of absorbing dyestuffs, their behavior toward oxidants such as bleaching solution, the possibilities of such chemical reaction as esterification and etherification, and a host of other odds and ends. To the biologist, it is of interest to know the extent to which a given fiber supports or repels microbiological activity, such as mildew and other destructive micro-organisms.

There are borders between the various sciences in which tools from one or the other or both must be employed. As mentioned earlier, most of the commercial fibers now used are organic high polymers. In order to understand their physical properties, it is necessary to resort to an investigation of their physicochemical properties. It is desirable to know the degree of polymerization; in order to estimate this, one resorts to the colloidal chemist's measurements, viscosity or osmotic pressure. It is desirable to have a measure of the interchain bonding, say by hydrogen bonding, in which event it is necessary to resort to fundamental data from physical chemistry to calculate the attraction of the various chains in the polymer. It is furthermore desirable to have some idea of the relative crystalline and non-crystalline portion of the high polymer, in which case the tool of the X-ray technologist is applied to estimate this property. After the micro-biologist has established that a certain fiber will support micro-biological attack, it is necessary for the chemist, in co-operation with the micro-biologist, to develop suitable proofing agents to prevent such micro-biological activity. The chemist produces a color on a fiber and it is the job of the spectropist to analyze it. The physicist finds a fiber of peculiarly high dielectric content and it is the job of the chemist to determine the cause. The chemist alters the fiber by certain reactions and it is the job of the mircroscopist to trace the effect on the physical appearance of the fiber.

But the integration extends even further than this. Even today, the largest volume of fibers in commercial use are of natural origin. The agriculturist contributes to the production of better natural fibers by proper selection of plant breeds, soil conditions, proper fertilization, and improved method of harvesting. For example, scientists at the Southern Regional Research Laboratory have found that tire cord manufactured from Wilds cotton is far superior in service tests to a similar cord manufactured from Stoneville 2B. Very unfortunately the meteorologist has not yet obtained control of the weather, although he has made contributions of vital nature to weather prediction. Those in animal husbandry have made significant contribution toward the production of better wool through breeding and nutritional guidance.

Assuming that adequate knowledge of the properties of fibers from the physical and chemical standpoint are well known, *which is certainly not the case,* and that these properties may be controlled through the combined efforts of the agriculturist and the synthetic fiber manufacturer, how are these various qualities to be translated into an end product which is suitably adapted to the end use? This appears to be a job for the engineer. Textile manufacturing *is* an engineering proposition. The fiber is the raw material. It is the job of the textile engineer to take this mass of disorganized fibers and, by appropriate means, to organize them in positions essentially parallel to one another. The fibers thus aligned with respect to each other are anchored into place, so to speak, by twisting around each other, forming the fundamental product of any textile operation, namely the yarn.

As soon as the yarn is formed in the mill, it is necessary to re-submit the product to the physicist for evaluation. Once again, the stress-strain relationships of the yarn are of great importance, dependent intrinsically upon the stress-strain relationship of the component fibers but not in a direct relationship to those properties. The complications of fiber organization and of twist have been imposed. The tensile strength of the yarn is to be determined and again it is dependent upon the intrinsic strength of the component fiber, but is not a direct function of the strength of the fiber since such factors as twist and the co-efficient of friction between the surfaces of the fibers again enter the picture. The behavior of the yarn with repeated bending, or flexing, is again related to the intrinsic fiber property, but not in direct relationship. The organization of the fibers within the yarn are subject to review by the microscopist, and often the chemist is asked to check the fiber content of blended yarns.

If the yarn so produced enters directly into the end-use, very often the chemist is asked to co-operate with the engineer in improving the over-all tensile strength of the yarn. Occasionally he is asked to alter the dielectric properties of the yarn by chemical treatment or by the addition of bonding materials such as the synthetic resins. He is asked to make the textile material compatible with the medium in which it is used, improved adhesion to rubber and to plastics or greater resistance to micro-biological attack and the like being required.

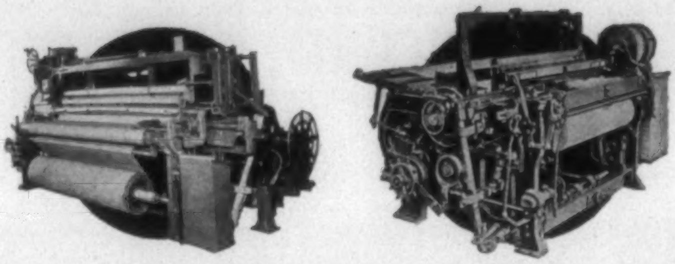
Assuming, on the other hand, that the yarn is to enter a woven fabric, this is another engineering operation. By mechanical means, yarns are inserted alternately above and below other yarns to form the woven fabric so familiar to all. This is not accomplished, however, by the textile engineer, or weaver, without relying on the chemist to supply sizing formulations which will afford smooth weaving. These sizing compositions appear to be perfect culture media for most of the micro-organisms which attack textiles and it is necessary for the chemist to co-operate with the micro-biologist in providing for this in the formulation by including suitable proofing agents.

Woven fabrics have physical properties which are peculiar to themselves. Once again it is necessary to rely on the physicist for evaluation. For example, 50 single yarns lying side by side in a width of one inch might have a total strength of 40 pounds; when woven into a fabric and tested again, one inch width of this material very likely will have a tensile strength of 50 or even 60 pounds. This additional strength, apparently drawn from thin air, appears to violate the laws of mechanics. It is necessary for the physicist, or the theoretical engineer, to realize that the loads are being distributed over very short lengths of the yarns involved by the presence of the cross members of the fabric with the result that more of the intrinsic strength of the component fibers is now being utilized than when each yarn was allowed to shift for itself.

If I may be allowed a digression at this point, this seems to illustrate to me the strength in organization which should be characteristic of any research group. Several members of the group pulling independently may indeed carry the load required, but when their efforts and their talents are co-ordinated and inter-related through proper methods of co-operation, the whole may possibly exceed the sum of the component parts.

The impact resistance, the bursting strength, the permeability of the fabric to air, and the thermal insulating qualities of the fabric, now become the province of the physicist for study. The chemist in turn may submit the fabric to various procedures and vitally alter the permeability to air, or the thermal insulating factor, or even the bursting strength. Furthermore, the chemist may bleach the fabric to produce a very acceptable white material or he may apply any of a multitude of colors which are available. In order to do these things, he must have some idea of the chemical composition of the component fibers, and in these instances such physical characteristics as the twist of the yarn or the closeness of the weave enter into the picture. He may apply coatings of rubber or plastics to the fabric and make it impermeable to air or water, he may apply proofing materials to make the fabric water-repelling, or he may confer the quality of mothproofness on the material. The microscopist, in turn, can check the depth and uniformity of dyeing or may determine with accuracy the position of coating on the finished fabric.

If I should be asked what are the ideal qualifications of a scientist engaging in textile research, I believe that I would say that he should be an expert in one of the fields mentioned and that he must be aggressively co-operative. No one man can be an expert in all the phases involved in textile research; it is a rare organization where there is a collection of men whose combined knowledge covers the gamut of requirements. But if the group as a whole works together with enthusiasm and intelligent direction, there are few problems in the textile industry which cannot be improved by its attention.



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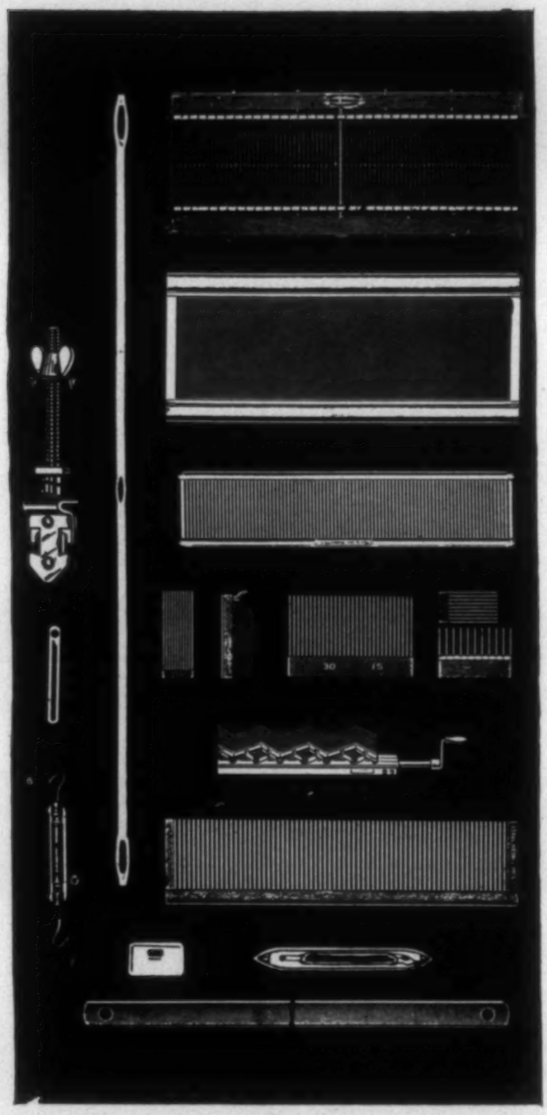

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Spinning And Weaving In Britain

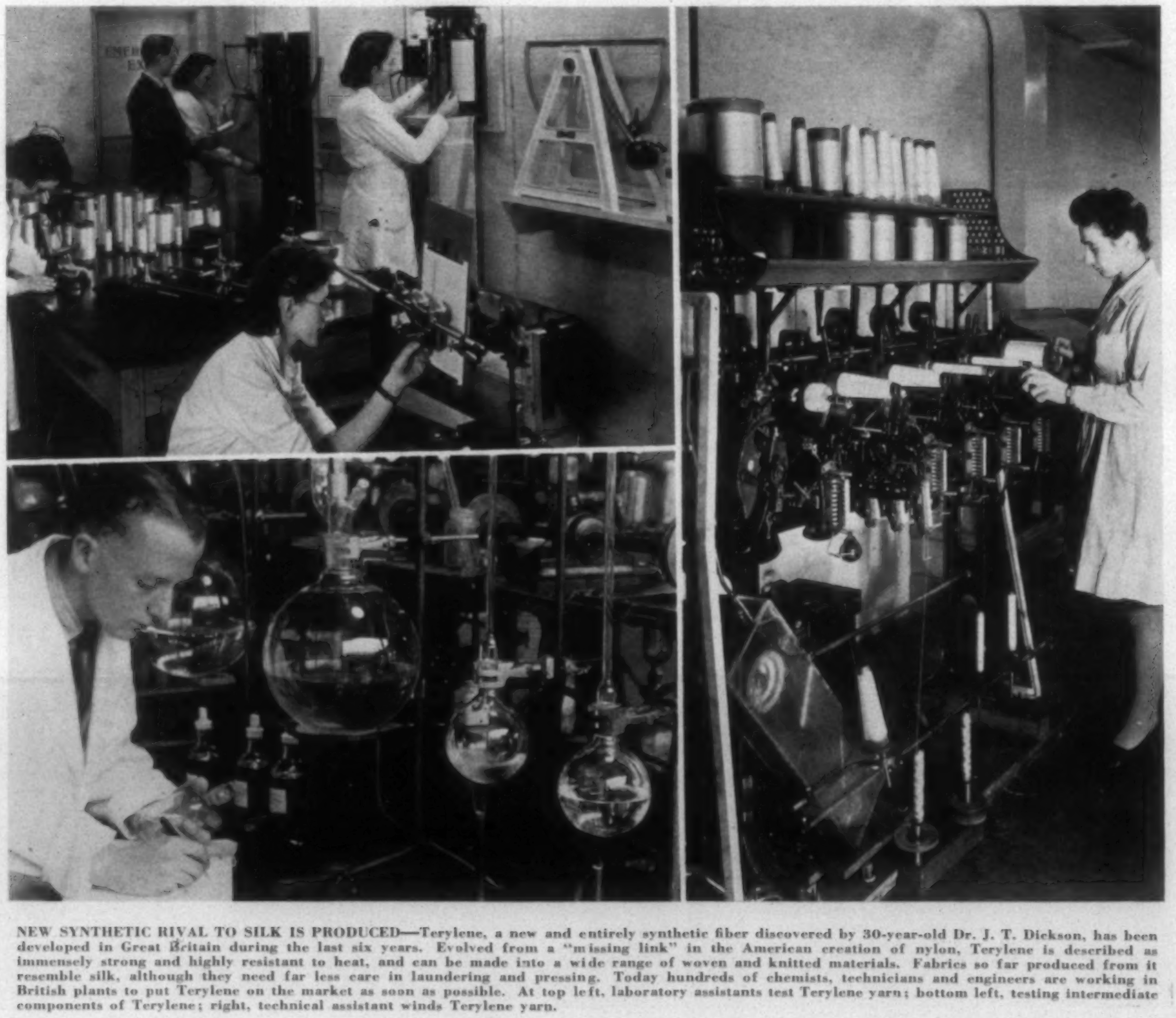
By JAMES DIBB, On British Broadcasting Corporation

IN a climate having much less of the sun, and very often wet and chilly because of mists from the seas that are all around us, the cloths made by early British spinners and weavers had, before all other characteristics, to be very warm and very hard-wearing. Our aim was then utilitarian rather than artistic. Cloth making in those times was an industry carried on in the homes of the people, for the greater part. The spinning and weaving of the wool of the rough hill-sheep, or of the flax which was grown locally, were family occupations followed when the weather interfered, as it could do very seriously, with work in the fields or on the small fishing boats at sea.

What was produced was sound stuff, however plain in appearance, and it served its purpose very well. But, under such conditions, there was not much chance of artistry. Nonetheless, as the years followed one another, there came a reaching out towards something that added beauty to serviceable qualities.

In the Scottish Highlands, where the people were then Celts who spoke no English but only their own Gaelic, the clans had their distinctive tartans, the lines and bands of bright color in which, against a quieter background, called for no small skill in weaving. And, apart from this special tradition, both the Southern non-Celtic Scots and the English learned to make use of such vegetable and mineral dyes as their country offered, to enrich the shawls worn by women and the tweed cloths in which men who could pay for such good stuff were dressed. In time, certain localities became noted for their skill in making a quiet dignity and beauty about the cloth, and to them came demand from overseas also.

Once, however, the restless ingenuity of man had found means to harness machines to spinning and weaving, the factories in the towns they created—and hideously ugly towns they were at first—drained the country villages of the men, women and even the children who would otherwise have carried on the tradition they had inherited. That is to say, they took away by far the greater part of them. Somewhat



NEW SYNTHETIC RIVAL TO SILK IS PRODUCED—Terylene, a new and entirely synthetic fiber discovered by 30-year-old Dr. J. T. Dickson, has been developed in Great Britain during the last six years. Evolved from a "missing link" in the American creation of nylon, Terylene is described as immensely strong and highly resistant to heat, and can be made into a wide range of woven and knitted materials. Fabrics so far produced from it resemble silk, although they need far less care in laundering and pressing. Today hundreds of chemists, technicians and engineers are working in British plants to put Terylene on the market as soon as possible. At top left, laboratory assistants test Terylene yarn; bottom left, testing intermediate components of Terylene; right, technical assistant winds Terylene yarn.

later, such men as John Ruskin and William Morris protested that such craftsmen had something to offer which the factories would not then give, that individual quality of touch and discrimination which is the gift of Heaven to the artist, but not to the machine.

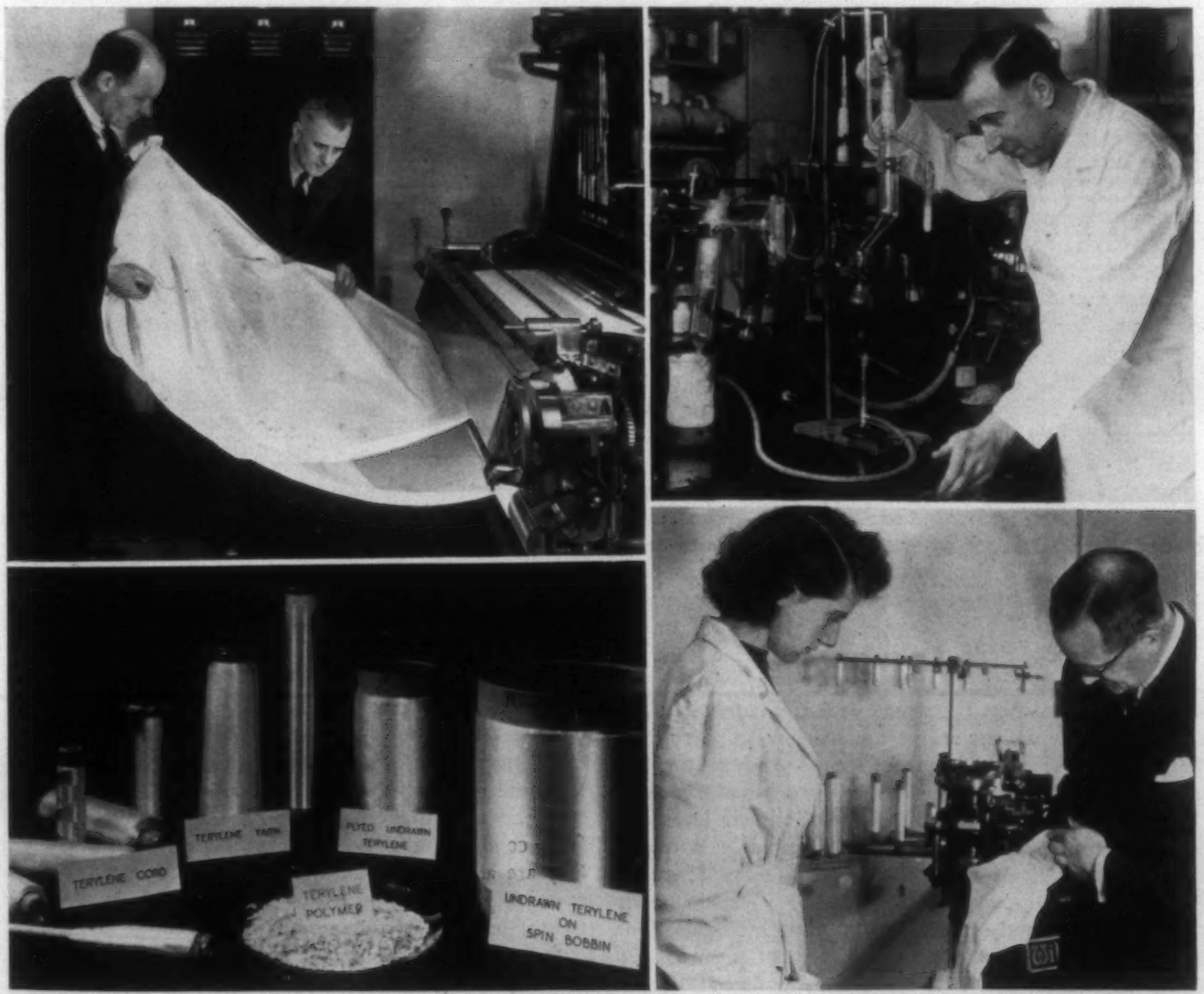
Despite the overwhelming triumph of the mills, and the qualities of the fabrics they became able to make, as time went on—and they turned out cloths as good as the great majority of buyers wanted—in certain outlying parts of Scotland, Wales and Ireland, hand-woven cloths which conformed to the immemorial cottage traditions, were still being made. And not only to satisfy local taste. It soon became clear that what may be called the *idiosyncratic* qualities of such deliberately produced materials had an irresistible attraction for certain classes of buyer in the outer world — and especially in the United States of America. The choicest of the tweeds made on the hand-looms of Harris and Donegal craftsmen of the old sort were steadily shipped to meet the desires of a well-to-do and fastidious minority.

It made plain the fact that the craftsman of the humble hand loom had still his public which, though it was limited in numbers, was exactly the sort of public he wanted. He asked for intelligent appreciation of his artistry and the pains he took in its application. So stimulated, he could go on giving his very best.

For the past half-century, I have been actively engaged in the production and sale of Britain's choicer commercial textiles and I have been enabled to watch the development of the demand for such desirable things. And for over 20 of these years, my wife and I have devoted our spare time to exploring in earnest the best ways of satisfying tastes which are even more exclusive still.

Spinning and weaving by hand have certain obvious adadvantages where each fabric is to have its own special combination of qualities. We regard ourselves as committed to both, laborious as they are, so that our individuality might be expressed in the work. Much the same may be said of the preliminary operations. For so numerous nowadays are the possible materials to be pressed into service for the building up of the distinctive yarns we need that we are bound to consider the nature of the contribution that each can make and very carefully build up the combination that appears to us to serve our creative purpose best.

Even now we cannot but be aware of the tendency towards freer and freer self-expression which may be familiarly called a desire to be different from the crowd. People will come to regard the acceptance of the standard goods of the multiple stores as unworthy in a person of discrimination. And then spinners and weavers who think and work as we do will not lack clients.



Top left, Terylene manufacturers examine cloth woven on experimental loom; top right, Dr. J. T. Dickson, discoverer of Terylene, examines test tubes in his laboratory; bottom left, samples showing various stages of Terylene production; bottom right, manufacturer and laboratory assistant examine experimental production of stocking knitted from Terylene.—*Photographs from British Information Services.*

Dyeing and Finishing

Modern Trends In Screen Printing

By FRED F. JACOBS, Textile Colorist, General Dyestuff Corporation
— Before American Association of Textile Technologists —

ORNAMENTING textile fabrics dates back so far that it has never been possible to ascertain the time and place of its origin. It is believed, however, that in the Far East the Hindus and Chinese have practiced this art of hand coloring textiles from the earliest recorded times. From there the knowledge of this art traveled to Europe where some historians report the presence and practice of this technique by some monasteries during the Middle Ages.

The source of modern textile printing, however, can more easily be traced. It originated with block printing in India. This art consisted of cutting a design in relief upon wooden blocks, the raised parts of the design were then covered with color and transferred to the fabric by stamping. This knowledge of stamping a pattern on textiles then traveled westward, through Persia and Asia Minor until it reached Europe in the latter part of the 17th Century. As block printing was only suitable for comparatively coarse designs, improvements were found necessary and so the process went through a series of changes. New ideas for pattern application sometimes had nothing in common with the original method.

The preparation of the screen itself as used today is most likely a modern adaptation of a Chinese method of spraying a pattern on to the cloth. For such a process, the desired pattern was cut from paper which in turn was placed on top of the cloth. The outline of the pattern was then sprayed on the fabric. As the designs became finer the stencil had to be strengthened and this was done by connecting the various parts of the stencil by human hair. From there it was only one step further to the use of a coarse fabric as a base or support for such paper stencils. Finally in place of a paper stencil the desired pattern was painted in.

In the present-day use of screen printing a pattern is prepared in the following manner: To a wooden frame is fastened a suitable cloth, then each separate color from the original paper drawing is outlined on such a screen. Naturally only one color of the whole pattern is used for each screen. As the patterns on the average consists of four to five colors, there are four or five screens to each set.

The actual printing is done on specially constructed tables. The surface of these tables should be absolutely level and is covered with soft felt which is protected by a cotton cover permanently tacked to the table. On top of all of this is placed a removable back gray, which is changed each time with either a change of pattern or color combination. At this point the actual cloth for printing is spread on the table. The length of the table is preferably 60 to 80 yards so that a full piece of cloth can be printed in one operation, thus avoiding the troublesome fitting of continuous patterns as used in dress goods printing. For discontinuous patterns as encountered in printing table covers or handkerchiefs, the length of the tables is of lesser importance.

The print tables have a guide rail to which are attached stoppers. The distance between the stoppers is governed by the length of the repeat of a given pattern. On dress goods patterns, the repeat may be around 36 inches, whereas on large table covers it may be every 74 inches.

To assure a proper fit from screen to screen in a given pattern each screen is provided with a suitably located metal projection which when printing is fitted flush to the stationary stopper on the guide rail. This will produce the desired repeat distance and also a perfect fit between the various screens of a pattern. Within the frame of the screen is finally poured at one end, the print paste which is spread evenly over the whole surface with a so-called squeegee. In actual printing every other repeat is left unprinted and is filled in later. This is done to give a chance for the print paste to dry slightly on the surface and prevent a possible mark-off in the back of the screen which otherwise might be transferred to the unprinted parts of the cloth due to the fact that the screen itself is wider than the repeat of the pattern and would therefore overlap the printed parts. As the printing is purely a manual operation one major problem is to select a proper team of printers for a given print job. The penetration and, therefore, the depth of shade is governed to some extent by the pressure the printer applies on the squeegee. This naturally varies from one man to another. For this reason, generally the same team of printers should finish a complete order, as in a possible change the fill-in repeats due to this variation in hand pressure may show in turn a variation in penetration and in surface intensity of the colors, producing uneven results.

As usual in printing textiles either by screen or by machine the printed material is dried by various means and then further processed by a fixation of the colors in steaming and the conventional finishing operations.

Screen printing is a big industry today and as such faces the same problems as other industries. It is by no means stationary as constant improvements are being made. Aside from competition between the screen printers themselves they are also confronted with a certain competition from machine printers. The industry, therefore faces the same serious problem of the survival of the fittest and which, with the return of a buyers market is particularly intensified. Screen printing comparison to machine printing offers the following advantages:

Firstly, large repeats which are of great importance in

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HUMIDIFICATION and COOLING

AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE the table cloth and drapery lines. Attempts have been made by machine printers to increase the circumference of copper shells. This dimension had to be kept, however, within the limits of the conventional printing machine. Repeats of, say, 72 inches would undoubtedly require a fundamental change in the structure of the present-day machinery.

Secondly, short runs. For all practical purposes the screen printer can accept an order to print only one piece of cloth. On the other hand a 10,000-yard order or 2,000 yards for five individual color combinations is about the smallest order a machine printer would take. Here the relative cost of the two processes has to be considered. Let us face the machine printer first. We should disregard the cost of the design at this point as this would be the same for both methods. Considering a ten-color drapery pattern the cost of engraving each of the required 40 to 50-inch shell is about $700; a chromium plating, considered today as essential averages $70. This brings up the cost to $770. The cost of the 10,000 yards of cloth essential for the first run, including printing and finishing charges is about $5,000. The converter, therefore, has an investment of about $6,000 on one pattern without any assurance as to how well such a pattern will sell.

For the first run on a screen printed pattern the cost of screens would be about $400, assuming an average cost of $40 per 50-inch screen. Adding the cost of a small yardage of cloth and the printing and finishing charges, the total cost would still be within $1,000 for the pattern, with an additional advantage that a wrong styling would not tie up a large investment and a considerable yardage of cloth. The actual print charges are five to ten times higher for the screen printing method itself.

Finally, screen printing perhaps offers more possibilities in styling and intensity and brightness of color which is difficult if not impossible for technical reasons to match by means of machine printing.

A number of screen printing plants grew up with the industry, whereas others remained in their studio stage. These two groups do not compete with themselves, as the large ones hardly care for very small specialized printing orders. The smaller ones, on the other hand, are not equipped to handle volume.

Recent years have brought a number of modern procedures into being. Years ago the pattern in each screen, as mentioned before, was painted in by hand, a method which even now is not completely eliminated. Moreover, most of the screens are now produced photographically. In this technique the sensitivity to light of gelatine in conjunction with ammonium chromate is utilized. This gelatine layer in turn is reinforced with paint for final use. The photographic possibilities have not as yet been fully exploited, and in the future we probably can expect to see screen printed designs showing fine shade gradations. Trials have been made to this effect, but the shaded areas in the screen proved to be too thin and insufficiently durable. Europe probably is more advanced in this method today than we are, as they employ for their photographic process a system similar to a photographic reproduction used in paper printing. By employing dots of various sizes a shade gradation is obtained. This is achieved by placing two negatives with parallel lines at right angles to each other and in front of the regular pattern negative. By having the crossed negatives in an off contact position a slight blurring is obtained which prevents a sharp outline of the dot.

The cloth used for screens was at one time exclusively a specially woven silk. Today some nylon and particularly vinyon has found a wide use for this purpose. Vinyon is very durable and is not weakened by either acids or alkalies present in many print pastes. However, it has to be handled carefully in washing and drying as it becomes quite thermoplastic at relatively low temperatures.

A further improvement in the manufacture of screens is the use of magnesium or aluminum angular strips, which prevent possible warping of the frame without adding appreciably to the weight. With such a stabilized screen a much better print registration can be obtained.

The use of tacky surfaces on screen printing tables is another modern advance in screen printing. The common procedure was to pin the goods to the surface of the table cover. Now, more and more plants are applying a layer or film of wax on the surface which is sufficiently tacky to hold the cloth in position and eliminate pinning. In order to prevent a leakage of wax through the various layers, an oilcloth is used as a top cover. Lately emulsions, probably latex or some of the resin emulsions are being introduced for the same purpose. With the advent of tacky surfaces the cloth is now being laid on the table by a specially constructed carriage which unrolls the cloth and presses it to the surface of the table. Some claim that tacky surfaces are not suitable for jersey fabrics. This cannot be substantiated because even very coarse wool jerseys for heavy sweaters have been found to adhere firmly to such a surface and show excellent print quality.

While on the subject of tables, it is interesting to note how the present shortage of building materials has brought forward the inventive mind of some screen printers. There is one instance of a screen printer who had a contract for printing and had rented a space but he could find no lumber for his tables. However, he had a perfectly good floor and with floor scrapers and sanders, leveled and polished the surface and made what may be termed "runways." He covered these in the conventional manner and produced the desired surface. No bending down for moving the screens or working the squeegee was necessary as they had extending arms. As another instance a Belgian printer could not obtain seasoned or hard wood lumber. He, therefore, prepared the surface out of what he had on hand, then built up the sides a few inches and poured his surface. He used a thin cement mixture, which before hardening found its own level giving him a perfectly hard surface which he finally polished and then applied wax for tackiness. His printing procedure was slightly modified in so far as he realized that if a soft surface requires a hard squeegee to get a perfect impression of the color—a hard surface would require a soft squeegee to get the same effect.

One of the major problems in screen printing is the drying of the printed material. Generally this is done by hanging the printed cloth over the table and let it dry under the prevailing air conditions. During the winter months the problem is not as acute as in the summer with its usual high humidity atmosphere. Heavy drying devices have been tried, such as heated tables, hot air blowers or ordinary fans. One has to bear in mind the fact that dry air at room temperature will dry the prints quicker than humid air at higher temperatures. By raising the temperature through heating devices very little additional drying is obtained. It is true of course that warmer air will absorb more moisture and probably will dry the first few tables quicker but then it also

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reaches its saturation point and this causes a general discomfort for the worker and a lowering of efficiency.

This problem can be greatly simplified by a dehumidification of the air. Such an installation in many cases will prove to be not much more expensive than other devices much less efficient. After drying the material is subjected to either neutral or acid ageing or pressure steaming depending on the requirements of the colors used.

In describing steaming conditions a number of variable factors have to be considered. On the average, however, saturated steam at low pressures have been found to produce the best results. In acid ageing the tendency is to use an excess of acid, whereas in fact small amounts of acid are more beneficial. One has to bear in mind that Rapidogen colors for instance are stabilized Azo dyestuffs. They contain a diazo salt, a naphthol and a stabilizer. In acid steaming the stabilizer is broken down and a coupling of the salt with the naphthol takes place. In using excessive amounts of acid the naphthol may be precipitated before coupling can take place.

Conventional agers for steaming machine printed fabrics are fitted with many rollers over which both the back and face of the fabric must travel. With the considerably heavier deposit of surface color applied in screen printing, this type of ager cannot be used without the danger of marking-off onto unprinted areas. In this instance, therefore, a so-called tower ager is used which has only one roller inside over which the material travels face up.

In pressure steaming, saturated steam at three pounds pressure in the steam box will invariably show a good fixation of the prints. At higher pressures a number of colors show a pronounced change in shade so that in mixtures of grays, browns and greens the anticipated shade may not be obtained.

The finishing of the screen printed cloth is generally done in the conventional manner similar to machine printed fabrics with the exception of possibly the soaping. Whereas the machine printer in many instances can soap his prints in an open washer, screen prints must of necessity be rope soaped as there is too much color and gum present which cannot be removed in that soaping. Only by proper rope soaping can one expect to obtain the required fastness to commercial laundering.

The equipment of a modern screen printing plant should be complete as only then can one expect proper control over the entire operation. Besides tables and screens it should have a drug room and color shop separate from the actual print room. The finishing operation should also be kept separate as excess steam from agers and soapers will further humidify the air. In acid ageing this is a very important point as contamination of the surrounding air with acid may cause a premature partial developing of acid sensitive colors resulting in poor fastness properties.

Use of Soapless Soaps Discussed At Meeting

The many uses of "soapless soaps" in industry were outlined recently at the quarterly technical session of the South Central Section of the American Association of Textile Chemists and Colorists in Chattanooga, Tenn., by Dr. O. M. Morgan of the National Aniline Division, Allied Chemical & Dye Corp. He pointed out that these synthetic organic detergents were originally developed for the textile industry as wetting, scouring and dyeing assistants to eliminate specky dyeings due to lime curd formation, which actually waterproofed the fabric and acted as a resistant to the dye. "Today their use by textile manufacturers is almost universal," he said, "and many other industries have adopted these products on their merit."

Jack Anderson of Peerless Woolen Mills, section chairman, presided at the meeting and announced that it had been decided to hold a fall outing Sept. 5-6 at Lookout Mountain Hotel, near Chattanooga. The Southeastern Section has been invited to make it a joint affair, he stated, and members of the Piedmont Section also will be invited to attend. Mr. Anderson reported that Dr. Harold W. Stiegler of Lowell, Mass., director of research for the national association, had tentatively accepted an invitation to address the banquet Sept. 6. It was pointed out that there would be no business sessions in connection with the outing, with the program featuring a handicap golf tournament and other sports events. Fletcher Kibler of Morningside Chemical Co. is chairman for the outing.

Infra-Red Radiation Of Dyestuffs Studied

The reaction to infra-red radiation of the dyestuff used in clothing is an important factor in their warmth or coolness, according to new studies and experiments made at the Philadelphia Textile Institute, as part of a research project sponsored by the Philadelphia Section, American Association of Textile Chemists and Colorists. Wool, cotton, cotton duck and rayon fabrics identical in every respect including color, but dyed with different commercial dyestuffs, were used in the experiments conducted at the Philadelphia Textile Institute. Because of differences in the infra-red absorption characteristics of the dyestuffs used, the dyed fabrics, although identical in color, varied as much as 14° Farenheit in temperature under prolonged exposure to sunlight. To overcome the difficulty of obtaining uniform intensity of natural sunlight, photo-flood lamps, containing the same energy as sunlight, also were used. The results of the studies and experiments, as well as the apparatus developed for measuring differences in temperature of fabrics, was placed on public exhibit as part of the institute's exhibit at the recent International Exposition for Fashion Manufacturers, Grand Central Palace, New York City.

In a leaflet entitled, "How Cool Is Your Color?", the institute points out that the new discoveries concerning the wide variations in infra-red absorption characteristic of commercial dyestuffs "may prove of substantial significance to the textile and apparel industries and strongly influence the clothing habits of the American public." The leaflet calls attention to the fact that one of America's earliest and greatest scientists—Benjamin Franklin—made the first experiment of which we have knowledge in this field, on a winter day in Philadelphia approximately 186 years ago. Franklin placed squares of cloth—white, several colors and black—on top of the snow exposed to winter sunshine. The white cloth remained on top of the snow, the intermediate shades sank slowly as the snow melted underneath, and the black sank from view quickly because the snow melted rapidly under this sample. Franklin concluded, somewhat erroneously, that the darker the colors the greater the absorption of heat from the sun. "Of course," the leaflet says, "little was known then about solar radiation, and the wide variety of synthetic dyes available today, with varying infra-red absorption characteristics, were still a hundred years in the future. Franklin did not realize that he could influence the temperature of fabrics to an important degree by selecting the dyestuffs that were applied to them."

A formal paper prepared on the subject declares: "Our broader understanding of radiation phenomena has led us to reconsider some of the almost universally accepted "so-called" facts as to the relationship of the color of a fabric to its warmth or coolness under sunlight or artificially produced radiation. Our study has demonstrated that it is entirely feasible to influence the behavior of colored fabrics as to temperature changes when exposed to light by selecting dyestuffs on the basis of their radiation spectra. Moreover, our data indicates that the temperature differences resulting from variations in these dyestuffs radiation characteristics are sufficiently great to consider the practicability of coloring summer garments with low infra-red absorbing dyestuffs for coolness, to color tents, tarpaulins, awnings and similar fabrics with low infra-red absorbing dyestuffs when low temperatures are desired or high infra-red absorbing dyestuffs when heat retention is desired, and finally to color winter clothing with dyestuffs of high infra-red absorbing characteristics. We have heard much in recent years about homes constructed to utilize the energy of the sun. It appears equally attractive and quite feasible to color our fabrics with dyes which absorb or reflect the sun's energy as our comfort and convenience dictate."

A. A. T. C. C. To Hold Convention In Chicago

Tentative plans have been announced for the 26th national convention of the American Association of Textile Chemists and Colorists to be held Oct. 23-25 at the Congress Hotel, Chicago, under the auspices of the Midwest Section. Features of the program include an all-day technical meeting, presentation of the intersectional contest papers, an open meeting of the research committee and the annual banquet. The national technical program committee, under the chairmanship of Dr. Miles A. Dahlen, is arranging a general meeting at which three technical papers of general interest will be given and six group meetings. The national intersectional contest committee under the chairmanship of Patrick J. Kennedy, has received assurance from seven sections that they will participate in the contest.

The executive committee of the Midwest Section is organized as follows: general chairman—Elmer F. Smith, American Aniline Products, Inc.; dining—Arthur T. Brainerd, Ciba Co., Inc.; exhibits—S. Klein, Calco Chemical Division; finance—Joseph H. Jones, Phoenix Dye Works; hotel and transportation—Eric Camp, National Aniline Division; publicity—Elliott Morrill, Rit Products, Inc.; printing—George B. Chabot, Jr., Calco Chemical Division; registration and reception—James Morrison, 505 South Greenwood Avenue, Park Ridge, Ill.; technical program—Herman Boxser, Western Felt Works; ladies—Frank Meyers, Geigy Co.; entertainment—Norman Koehler, Phoenix Dye Works.

Study Fastness Of Color To Perspiration

The committee on fastness to perspiration of the American Association of Textile Chemists and Colorists has been reactivated from its status as a reference committee and will actively pursue investigations concerned with fastness of colors to perspiration, under the chairmanship of John N. Dalton. A review of the present standard methods of testing for fastness to perspiration is being made because of many failures of garments worn by the consumer. Plans have been completed for laboratory investigation of the condition of the fabric with regard to accidity and alkalinity before tests are made, the test solutions used, and test instruments. Inter-laboratory tests will be made and the effect of the composition of the test solutions on several classes of colors on rayon and cotton and wool will be determined. A simple instrument for using the plate method of testing for fastness to perspiration is being developed in the A. A. T. C. C. laboratories. Results obtained in this investigation already indicate distinct advantages of the plate method over some of the present test methods.

A. A. T. C. C. Group Discusses Process Water

The Southeastern Section of the American Association of Textile Chemists and Colorists held its summer meeting in Atlanta, Ga., recently with a question and answer session on "Process Water" comprising the program. Approximately 115 textile chemists attended the event at which A. Kempton Haynes of Rohm & Haas Co., chairman of the section, presided.

Leslie Bamberger of Lanett Bleachery & Dye Works, Lanett, Ala., was the quizmaster asking the questions that were answered by the following group of chemists and experts: W. H. Weir, engineering department of the Georgia Department of Health; M. C. Welker, American Cyanamid Co.; W. Douglas Smith of Calgon, Inc.; J. S. Kneal, Permutit Co.; Fred Melchoir of the Coca-Cola Co., and M. M. deJarnette of the Georgia Department of Health. They were introduced by Dr. Howard Waddle of the West Point Mfg. Co., secretary of the section.

The 32 questions sent in by members of the section pertained to all phases of process water, its uses in textile dyeing and general textile processing, control, removal of algea and rhodamine, methods of determining pH, chlorination, reactions of water hardness with agents commonly used in textile processing, amount of iron necessary in water to interfere with dyeing, effect of variations in the pH of process water on various textile processes, effect of completely deironized water in textile processing, factors causing corrosion in water systems and its control, effect on viscosity of starch mixes and foaming in mill-sizing operations of boiling process water, deficient process water used in sizing, phosphates in dye bath, process water for vat dyeing of yarn on packages or beams, and other phases. Answers given to these questions were to be compiled by a board headed by Dr. Waddle and will be released to members in written form shortly.

Research Institute To Meet Nov. 13-15

The date for the 18th annual meeting of the Textile Research Institute has been set for the three-day period, Nov. 13-15, at the Waldorf-Astoria Hotel in New York City. The meeting will be conducted in three parts. All scientific discussions will be held Nov. 13, the general meeting for practical mill technicians will be held Nov. 14, and open house, a trip to the institute's laboratory at Princeton University, will be held the morning of Nov. 15. Speakers and subjects to be covered at the meeting will be announced later. William J. Fullerton, director of fabric development for Dan River Mills, recently was appointed to the institute board of directors to fill the vacancy caused by the death of Dr. Harold DeWitt Smith.

THIS IS NO. 63 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements
in winding equipment and new ideas in the winding operation

WORN THREAD GUIDES
(No. 50 Winding Machine)

When steel thread guides have been in use a long time, particularly when winding silk or other abrasive material, "thread cuts" may be found in a criss-cross pattern on the face of the guide. If the cuts are small and shallow, they will not cause much, if any damage.

However, when they become deep enough to be plainly visible, there is the danger of abrasion as the yarn is pulled from side to side over the face. This danger is increased when a change is made from one yarn size to another.

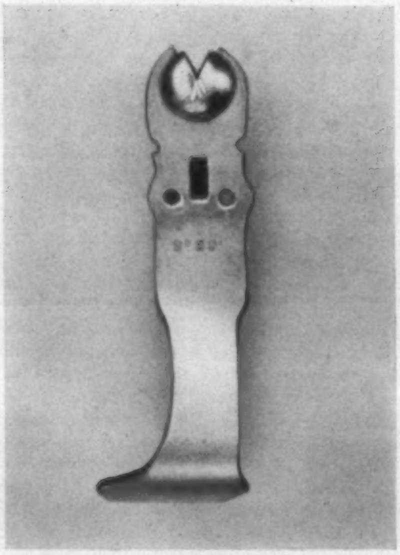

Fig. 1. Criss-cross grooves cut in guide are serious enough to necessitate replacement.

There is also the possibility of stitches forming, due to the short "dwell" of yarn when it transfers from one cut to another at the end of a traverse.

Either of these faults is costly enough to warrant replacing guides before they are deeply cut.

Occasionally a guide is used that has much too wide a slot for the yarn being wound. This causes a dwell at the end of the traverse that results in an improper lay of yarn and in hard ends. Then, as wear takes place at the corners of the guide, there is an increasing tendency to throw stitches over the ends of the package.

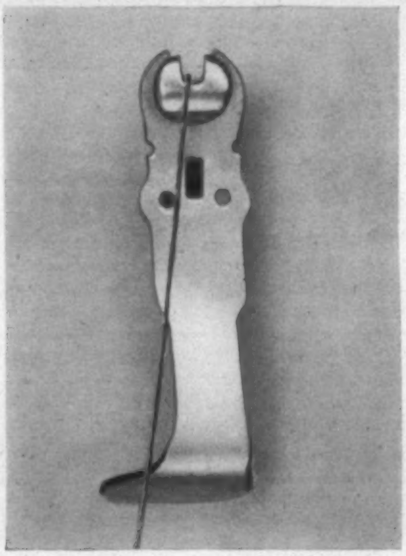

Fig. 2. The slot in this guide is too wide for the yarn. Improper lay of yarn and hard ends will result.

Porcelain guides become very abrasive when cut, and any chafing is particularly disastrous to filament yarns.

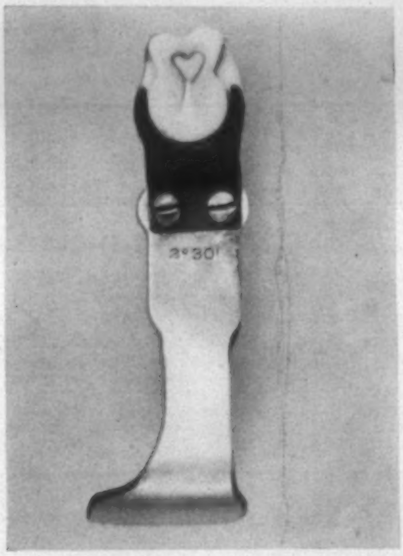

Fig. 3. Cuts in the slot were made by the yarn and, in turn, will chafe the yarn.

HANDLING SWIFTS
(No. 60 Winding Machine)

Some mills have reported that their operators have difficulty in putting swifts in position where the band-type brake is used.

This can be overcome by better control of the swift and by release of the brake.

The swift should be held at the hub by the left hand. The right hand should be used to pull the compensator down; this releases the brake and permits placing the swift in position in the brackets without difficulty.

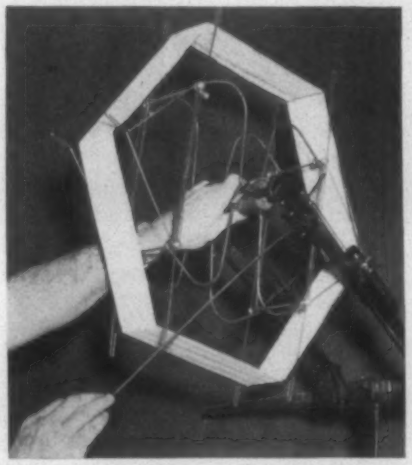

Fig. 4. Compensator is held down while swift is placed in position in the brackets.

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C. I. O. Version

In its anger against being subjected to any regulations whatever and an eleventh hour effort to influence President Truman to veto the Taft-Hartley Labor Bill which has been passed by Congress, the C. I. O. has released what it says is a "comprehensive analysis" of the measure by C. I. O. General Counsel Lee Pressman.

We feel reasonably certain that President Truman, in recognition of an overwhelming sentiment for the enactment of labor legislation, will sign the Taft-Hartley Bill.

We are even more convinced that should President Truman veto the measure it will be enacted by Congress over his veto.

Should the Taft-Hartley Bill become the law, as we believe it will, both the C. I. O. and the A. F. of L. will attempt to lessen the effect of the measure by claiming that it means less than it now appears to mean.

It is well therefore to take note and make a record of interpretation of the law as now being made by the general counsel of the C. I. O. and released by him under date of June 5, 1947.

C. I. O. Counsel Lee Pressman says in the release that under the Taft-Hartley Bill as sent to President Truman:

1. Employer associations are free to engage in unfair labor practices in the interests of the employer.

2. Employees discharged for union activities in violation of the law may nevertheless be denied reinstatement.

3. A provision which started out in the Senate bill as a prohibition on jurisdictional disputes between unions became in the hands of the conference committee a restrictive device even where only one union is involved.

4. Under a smoke screen of talk about "featherbedding" the conference committee has threatened payments now sanctioned by accepted industrial practice for employees who are called to work but not given any work to do or who are forced to stand by.

5. By specific action of the conference committee collective bargaining in any local situation may be impeded or prevented by an employer on the basis of acts or failures of any international union officer over whom the local employees may have no direct control.

6. The National Labor Relations Board, its structure and operations are to be twisted and ensnarled (unlike any other administrative agency in the entire government) with provisions which make its own general counsel virtually an agency within an agency, impose technical court rules where none are imposed on any other agency, prevent expeditious election procedures where there is no reason for delay.

7. Deleted from the Senate bill are all procedures for and even all references to, the promotion of voluntary arbitration as a last resort for a peaceful settlement of disputes. Instead, the conferees insist on strike-breaking as the sole solution.

8. Not content with tossing all collective bargaining agreements into the Federal courts and subjecting unions generally to suit in those courts, the conferees have insisted on expanding the invitation to raids on union funds by making unions financially responsible even for acts which were neither authorized nor ratified by nor possibly even known to, the union.

Making the charge that the conference report eased and condoned "employer unfair labor practices," Counsel Lee Pressman makes the following further analysis of the bill as sent to President Truman:

A. *Employer responsibility for acts of supervisors and employer associations limited*—The definition of "employer" has been changed so as to make it necessary to prove that unfair labor practices directed against employees were committed by one who can in a technical sense be proven to be an "agent" of the employer. This is apparently intended to give a free hand to employer associations to carry on union-busting activities in behalf of an employer and still be free from any restraint under the act. It may further have the effect of permitting foremen, superintendents, etc., to carry on similar activity under the screen of a denial that they are technically acting as "agents" of the employer (Section 2(2)). It should be noted that this not only protects the employer from any order of the board restraining such violations of law, but places the offending supervisors and associations themselves beyond the reach of the law and leaves the employees without protection against these tactics.

B. *Discrimination victims denied reinstatement*—The bill has been amended so as to prohibit the board from ordering the reinstatement of any employee discharged "for cause" even if the discharge was discriminatory and a clear unfair labor practice. The normal practice of anti-union employers has been to withhold their attack on union employees until some minor infraction can be discovered. They then allege this infraction as the "cause" for the discharge. In these cases it has often been conclusively proven that such infractions were not the true reason for the discharge, would not have resulted in discharge except for the employee's union membership, and that the discharge in question constituted clear discrimination in violation of the act. The amendment made by the conferees declares in effect that even though there has been such discrimination and such law violation, nevertheless as long as there has been such "cause" for the discharge the victimized employee may not be ordered reinstated. This amendment in effect nullifies the protection provided by the Wagner Act against discriminatory discharge (Section 10 (c)).

Counsel Pressman also says in regard to the liability of unions:

The Senate bill had made provisions for subjecting unions to suit in the Federal courts and had even permitted such action to be brought against the union not merely in the district where it maintains its principal office but in any district in which it could be said to have "duly authorized officers or agents" (Section 301(b)). In so doing, the Senate bill did not purport to affect the thoroughly justified provision of the present law which recognized the evil which existed when unions were subjected to suits for the acts of any one of their many members where such acts were neither authorized nor ratified by the union. Under the present law, therefore, unions have been declared to be liable only where there was proof of actual participation, authorization, or ratification of the acts in question. The conference bill has inserted a specific declaration that unions are to be held liable for the acts of their "agents" (Section 301 (b)) and, in addition, that in determining who is an "agent" the "question of whether the specific acts performed were actually authorized or subsequently ratified shall not be controlling" (Section 301(e)). It is thus proposed in effect that the door now be reopened to a wave of raids on union funds subjecting the unions to liability for anything and everything which may be done by irresponsible individual members or even by company spies who have insinuated themselves into the ranks of the union.

Upon the subject of "union security" as legalized in the Taft-Hartley Bill, C. I. O. Counsel Pressman says:

> A. The closed shop is prohibited (Section 8(a)(3)).
>
> B. The bill pretends to permit other forms of union security such as union maintenance, union shop, etc. BUT:
>
> 1. In order to be able to secure such a clause a union must not only have won an election and been certified as the collective bargaining representative (as the law now provides), but
>
> 2. Must in addition request and secure from the board another and special vote on the union's authority to make an agreement with an employer containing a union security clause, *and*
>
> 3. In order to receive such authorization the union must secure an affirmative vote of a majority, not merely of those who participate in the vote but of *all* the employees in the entire unit (including those who fail to turn out to vote) *and*
>
> 4. In any event the union is prevented even from having such a vote taken if it cannot prove that it has filed all required financial and other reports with the Secretary of Labor and has furnished copies of such reports to *all* its members (not merely the employees of the particular employer), and it must also show, not only that it itself has complied with this requirement, but that its international union has complied with the requirement with respect to *all* members of the international through the nation, *and*
>
> 5. In any event a union will not be permitted to have a vote to authorize it to have a union security clause unless not only all of the officers of the local but all of the officers of the international file with the board affidavits that they are not members of or "affiliated with" the Communist Party; *and*
>
> 6. Even after having succeeded in securing such a ballot and having succeeded in receiving the necessary vote and even if the union can secure the employer's agreement to grant a union security clause, the clause cannot be enforced against any employee expelled from the union for disruption, dishonesty, acting as a company spy or any other reason except the non-payment of dues; *and*
>
> 7. If the union is lucky enough to secure such a clause, it subjects itself to regulation by the board as to whether its initiation fees are, in the board's judgment, "excessive."
>
> (Sections 8(a)(3), 8 (b)(5), 9(e), 9(f), 9(g), 9(h)).

These are only a few of the many interpretations which the C. I. O. now places upon provisions of the Taft-Hartley Bill.

We have no doubt that when the Taft-Hartley measure becomes the law, Counsel Pressman will repudiate almost every interpretation which he now makes.

We have no desire to argue with him or to deny his assertions and interpretations because we feel certain that the measure will become the law and that interpretation of its provisions will be of great moment to industries.

We are devoting much space to the most important of the C. I. O. interpretations and they should be placed in the files of every mill.

We urge mills to obtain complete copies of the C. I. O. brief (Executives 5581) as sent out from Washington, D. C., for release to newspapers on June 5, 1947.

We have an idea that they will be *very* useful when the C. I. O. begins its attempts to place entirely different interpretations upon the provisions of the Taft-Hartley Bill.

Modern Travel

W. A. Graham Clark, textile expert for the U. S. Tariff Commission, Washington, D. C., and brother of David Clark, editor of TEXTILE BULLETIN, is one of the representatives of the United States at an economic conference at Geneva, Switzerland.

We quote the following from a letter received from Mr. Clark:

> Had smooth, uneventful air trip from Washington of about 3,500 miles in about 21 hours actual flying time, making four short stops enroute. Flew at 9,000 feet. Took only eight hours for 2,016-mile ocean hop from Gander (Newfoundland) to Shannon (Eire).

Flying from Newfoundland to Ireland in eight hours, or from 8 o'clock in the morning until 4 o'clock that afternoon, would only a few years ago been considered a sensational accomplishment.

In spite of the serious plane crashes which have occurred recently, aviation is making remarkable progress and being made safer as each week goes by.

A Report On Frank Graham

The House Un-American Activities Committee, in a report issued June 14 on the Southern Conference for Human Welfare, termed Dr. Frank P. Graham, honorary president of the Southern Conference on Human Welfare and president of the University of North Carolina, as "one of those liberals who show a predilection for affiliation to various communist-inspired front organizations."

The report stated that there was no evidence that Frank Graham was actually a communist but went on to say:

> Graham urged freedom for Earl Browder and served as sponsor for a dinner which the publication, *Soviet Russia Today*, held to celebrate the 25th anniversary of the Red Army. He also was associated with the International Labor Defense, legal arm of the Communist Party; American Committee for Protection of Foreign Democracy and Intellectual Freedom; American Friends of Spanish Democracy; China Aid Council of the American League for Peace and Democracy; Committee for Boycott Against Japanese Aggression; Conference to Lift the Embargo; Co-ordinating Committee to Lift the Embargo; Medical Bureau and North American Committee to Aid Spanish Democracy.

The House Committee on Un-American Activities, which includes Congressman Herbert Bonner of North Carolina, has made an investigation and in its report says exactly what we have been saying for 15 years or more.

President Frank Graham is always careful to stand just far enough over the line to avoid being identified as a communist but has co-operated with communists and ultra liberals almost without an exception, when an opportunity has occurred.

He was one of the sponsors of the 1935 Summer School, at Moscow University, for American youths and he helped raise money to finance the communist who sought to retain control of Spain after the Spanish people had risen against those who with the assistance of Russia had overthrown theeir government.

Frank Graham, in his thinking and in his actions, does not represent the views and opinion of more than a small minority of the people of North Carolina or even those of a small group of the professors and students at the University of North Carolina over which he presides.

For more of Dr. Graham's activities, see below.

Washington, June 14.—Dr. Frank P. Graham, president of the University of North Carolina, has gone on record with two other former War Labor Board members in denouncing the Taft-Hartley labor bill, a statement signed by Dr. Graham appeared today in the American Federation of Labor's weekly news letter.

Dr. Graham said "The bill will at a critical time, tend to weaken the foundations of free collective bargaining and will impair the growing values of the impartial umpire and of voluntary and binding arbitration. The bill will tend to remove the settlement of many industrial disputes from management and labor and transfer them to lawyers, the Federal board, and the courts. Provisions in the bill will require much clarification, numberless rulings by the board, heavy litigation in the courts, and long delays in settlements, with consequent confusion, loss of morale, and loss of production.

The bill will tend to weaken the disciplinary power of unions and cause as many headaches to management as to wise and responsible labor leadership. Some provisions in this bill will impair the equality of bargaining power, will unnecessarily do damage to the growing values of (a) the free and increasing responsible labor movement, (b) free and more socially responsible business enterprise, and (c) labor-management co-operation in the American way for maximum production.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

CEDARTOWN, GA.—In a notice to employees and the public, Cedartown Yarn Mills recently announced a greatly expanded medical plan for its employees. The new program goes far beyond the program in effect for the past several years in providing security for employees and their families. Although the new program is more costly, all increased costs will be made by the company in appreciation of the loyal working co-operation that has been extended by all employees, it was stated.

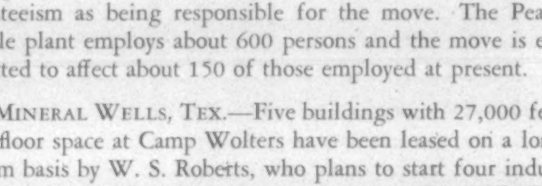
CHATTANOOGA, TENN.—Standard - Coosa - Thatcher Co. recently announced plans for expansion of the No. 2 Chattanooga and Gadsden, Ala., units of the company at a cost of approximately $900,000. Improvements planned at the Sanquoit Mills unit at Gadsden include a building addition of 15,000 square feet, installation of modern machinery and air conditioning of the plant, at a cost of about $500,000. A $400,000 addition to the No. 2 plant here will contain approximately 35,000 square feet.

PEACE DALE, R. I.—M. T. Stevens Co. recently announced that it plans to move the majority of worsted machinery from its plant here to an undisclosed location in the South, leaving only the woolen operations to continue in the local plant. Abbott Stevens, treasurer, listed antiquated mill property, lack of skilled help, and laws that encourage absenteeism as being responsible for the move. The Peace Dale plant employs about 600 persons and the move is expected to affect about 150 of those employed at present.

MINERAL WELLS, TEX.—Five buildings with 27,000 feet of floor space at Camp Wolters have been leased on a long term basis by W. S. Roberts, who plans to start four industries there which will operate as American Raw Silk Co., American Silk Weaving Co., American Dye & Finishing Co. and American Garment Finishing Co.

KNOXVILLE, TENN.—M. Lowenstein & Sons, Inc., has an exclusive option for 60 days to purchase controlling interest in the capital stock of Brookside Mills, Inc., it was announced recently. The mill is equipped with 199 cards, 998 looms, 65,744 ring spindles and 12,304 twister spindles. Officers of Brookside Mills, Inc., are listed as Abraham Tabin of Chicago, president; Walter B. Hug of New York City, secretary, and Albert Tabin of Chicago, treasurer.

CLOVER, S. C.—American Thread Co. is in the process of renovating and enlarging its local mill and mill village. Nearly $50,000 has been spent in installing sewers and rewiring homes in the mill village and new machinery expected to be installed soon will add 12,000 spindles to the plant.



Shown above is the recently completed addition to Southern Webbing Mills, Inc., near Greensboro, N. C. Installation of 20 new looms, several rubber covering machines and a finishing unit will enable the company to double its productive capacity.

GREENVILLE, S. C.—Purchase of operating control of Union Bleachery, second oldest commission finishing firm in the South, was completed June 2 by Aspinook Corp. of Jewett City, Conn., and R. W. Arrington, retiring president, was named chairman of the board under the new organization. William A. Broadfoot, president of Aspinook Corp., will succeed Mr. Arrington as president of the firm.

MOORESVILLE, N. C.—Mooresville Mills, Inc., recently announced plans for a construction project to cost $1,200,000. A new building, 460 feet long and 135 feet wide, will be constructed at a cost of about $500,000 to house a 10,000-spindle mill for the manufacture of synthetic yarn. Equipment for the new plant will cost approximately $700,000 and some 200 additional workers will be employed. Mooresville Mills, Inc., manufacture cotton and rayon apparel material, Turkish towels, wash cloths, drapery, slip cover and decorative fabrics.

COLUMBUS, GA.—West Point (Ga.) Mfg. Co. recently purchased control of Columbus Mfg. Co. of this city at a price reported to be about $7,000,000. The required 75 per cent of Columbus Mfg. Co. common stock has been sent to the purchasing firm. The Columbus company employs 1,200 workers and operates 75,580 spindles and 2,260 looms making sheetings and print cloths.

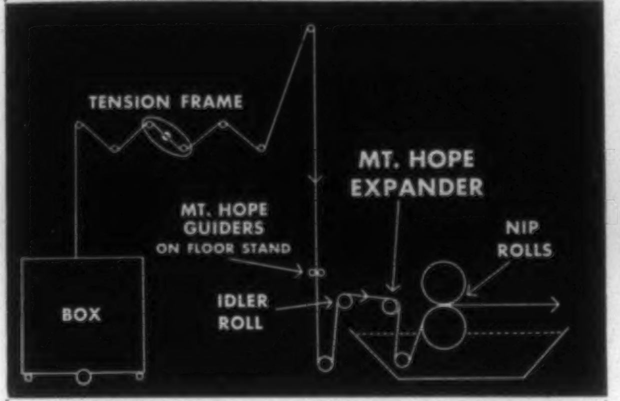
GREENVILLE, S. C.—Mary Frances Braid Mills, Inc., capitalized at $10,000, has been chartered by the state to manufacture flat round braiding. James S. Briggs is president of the new firm.

COLUMBUS, GA.—Muscogee Mfg. Co., planning expansion of facilities at its plant here, recently purchased the historic Mott's Green, site of the Columbus Public Library, and other lands for $100,000. The property was acquired from the city commissioners.

ROCK HILL, S. C.—Field work on the new celanese rayon plant of the Celanese Corp. of America is now in progress. Construction of the new $40,000,000 plant in Rock Hill is part of a large scale expansion program of the company in the three major fields of chemicals, synthetics textiles and plastics. Upon completion, the plant here will employ about 3,000 persons.

HOPE MILLS, N. C.—The Rockfish-Mebane Yarn Mills, Inc., of this city on June 7 took over operation of the plants formerly operated by Rockfish Mills, Inc., and Mebane Yarn Mills, Mebane, N. C. The former Rockfish Mills plants consist of three mills at Hope Mills producing carded yarns in both single and ply. The Mebane plant produces fine combed yarns. Mebane has been operated as a subsidiary of the Dixie Mercerizing Co., Chattanooga, Tenn. E. N. Brower will serve as president of Rockfish-Mebane Yarn Mills, Inc., and it was stated that there would be no change in the types of yarns produced or in their distribution.

Mount Hope Free-Wheeling EXPANDER



AS USED WITH A STARCH MANGLE

The above diagram shows how a prominent finishing plant uses the Mount Hope Free-Wheeling Expander to keep cloth at maximum width and to prevent the selvage from curling before the cloth enters a starch mangle.

An advantage found in this plant is that, due to the lack of cloth friction on the Mt. Hope Expander the sleeve stays cool, whereas, on other types, the heat generated by friction will cause the sleeve to warp out of shape, particularly near the bearings, and to actually slough off.

The only repairing required to date on this expander has been replacement of the Neoprene sleeve and this has *more* than double the life of sleeves used on other expanders. Since the sleeve represents the major cost of upkeep with any expander of this type, the economy of the Mt. Hope Expander is evident.

Other advantages are as follows: —

Expanders can be set at any desired angle to the cloth.

Ball bearings, grease packed, are securely mounted in steel spools to outlast many Neoprene sleeve coverings and so designed that they cannot stick nor turn on the axle and cut it.

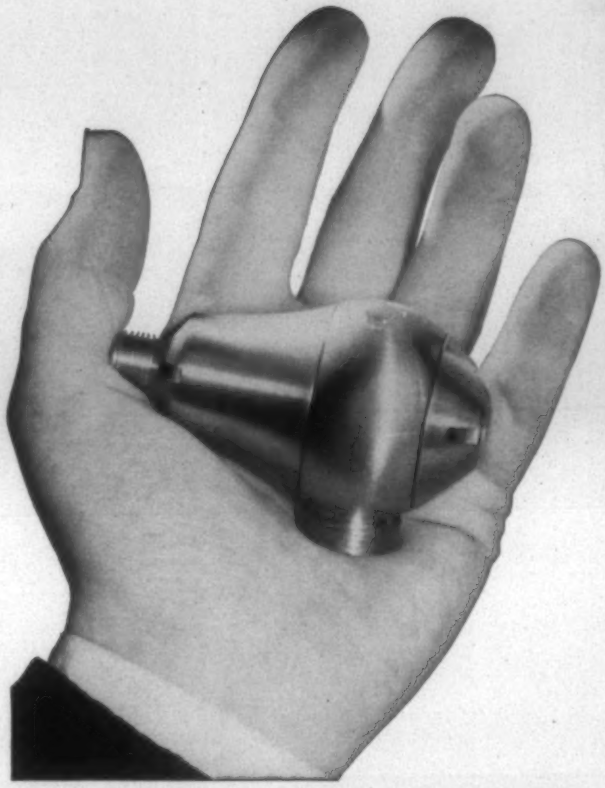
This expander is suitable for all fabrics, including rayon marquisette and rayon and cotton tire cord.

We will be glad to assist you, free of charge, with your cloth opening, guiding, or cross-stretch problem.

MOUNT HOPE MACHINERY CO.

42 Adams St., Taunton, Mass.

Representatives—John H. Andresen, Inc., 138 Grand St., Paterson, N. J.; Ingalls Engineering Co., 1214 Union Trust Bldg., Providence 3, R. I.; Slaughter Machinery Co., Charlotte 1, N. C.; Sidney Springer, 316 East Commercial Street, Los Angeles 12, California; W. J. Westaway Co., Ltd., Hamilton and Montreal 3, Canada.



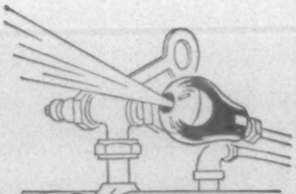
Parks Turbomatic Atomizer

AUTOMATIC - SELF CLEANING

IT "LEAKS" in just one place; leaks where it is supposed to; where atomizing is being done, where its vapor is being made. Can't and doesn't leak anywhere else.

Atomizers that leak in places not easily found; places one wouldn't be looking for, fritter away compressed air. They are expensive. The TURBOMATIC (the atomizer with the diaphragm) is efficient. Stays so.

No piping changes. The self-cleaning Turbomatic interchangeable with earlier and other models.



Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Dennis B. Parrish has resigned as superintendent of Bowling Green (S. C.) Spinning Co. to become superintendent of Bocar Mills, Inc., Clover, S. C.

John W. Clark of Greensboro, N. C., textile executive and member of the board of governors of the North Carolina Manufacturers Association; Harry W. Straus, president of Ecusta Paper Corp., Brevard, N. C.; and Charles B. Stainback, industrial syndicate manager of Westinghouse Electric Co., Pittsburgh, Pa., have been given honorary doctorates in textile science and engineering, respectively, from North Carolina State College, Raleigh.

Britt Armfield and Leroy Stadler, vice-presidents of Burlington Mills Corp., have resigned their positions to join the firm of William Klopman and Sons in the operation of Covington (Va.) Weaving Co., which Klopman purchased from Burlington. . . . A. L. Werner, president of Fabritex Corp., has succeeded Mr. Armfield as head of the foreign division of Burlington.

Howard J. Heffernan, assistant general sales manager of Monsanto Chemical Co.'s Merrimac Division, Boston, Mass., has been appointed division sales manager to succeed Dr. Lester A. Pratt, who became assistant to the division general manager. . . . Awarded the annual Monsanto scholarships for study to establish close co-operation between industry and university laboratories were Milton Kosmin, Costas H. Basdekis and Paul John Stuber, all affiliated with Monsanto.

J. J. Norton, Jr., assistant treasurer and manager of Gaffney (S. C.) Mfg. Co., presents a watch to G. S. Melton, master mechanic who heads the company's list of long-time employees with 50 years of continuous service. The watch was presented to Mr. Melton during a series of banquets at which 177 workers received gold pins for more than five years with the firm.

Robert O. Arnold, president of Covington (Ga.) Mills, has been named president of the University of Georgia Alumni Society.

E. B. Wooten, who has been manager and supervisor of the cotton department of Borden Mills, Inc., Kingsport, Tenn., for the past three years, will establish his own cotton firm at Camden, S. C., Aug. 1.

Allen Jones, general superintendent of Muscogee Mfg. Co., Columbus, Ga., has resigned to become manager of Lane Cotton Mills, New Orleans, La.

E. Hays Reynolds, left, has been appointed by Keever Starch Co., Columbus, Ohio, as its sales service representative in the Greenville, S. C., area. Another appointment is that of Charles G. Switzer as manager of the Keever textile sales division, with headquarters in Greenville. Mr. Reynolds is a graduate of Clemson A. & M. College with a B. S. in textile engineering. Mr. Switzer succeeds the late Claude B. Iler.

Donald M. Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., has been named chairman of the board of Coosa River Newsprint Co., which plans to construct the Southeast's first newsprint mill at a cost of $30,000,000.

J. H. McFarland, general sales manager of the carpet division of James Lees & Sons Co., Bridgeport, Pa., worsted yarns, has been elected vice-president of the company to succeed the late C. R. Wright.

E. S. McCall, head of the weaving department of Easley Cotton Mills, Liberty, S. C., has retired after 28 years of service. A. L. Hendricks, formerly with Dunean Mills, Greenville, S. C., has succeeded him.

W. H. Morrison has been placed in charge of the combined New Orleans and Atlanta offices of Turner Halsey Co. at Atlanta, Ga., to serve the South and Southeastern states. Armand R. Emrich, Jr., will be Mr. Morrison's assistant.

Claude C. Smith has resigned as assistant director of the cotton division of the Commodity Credit Corp. to assume new duties with the Staple Cotton Growers Co-operative Association at Greenwood, Miss.

William A. Murray, treasurer of John P. Maguire & Co., Inc., factors, also has been made a vice-president of the firm.

James H. Binger has been elected assistant vice-president of Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. In his new duties, Mr. Binger will devote most of his attention to the sales department and will assist Thomas McDonald, vice-president in charge of sales.

Dr. Charles L. Mantell has resigned as director of United Merchants Laboratories, Inc., New York City, to serve in a consulting capacity to industrial organizations in Argentina.

Dr. Harold C. Chapin, assistant professor of chemistry at Lowell Textile Institute, has been appointed full-time secretary of American Association of Textile Chemists and Colorists.

H. D. Foster has been named manager of the mechanical goods division of Goodyear Tire & Rubber Co., Akron, Ohio, succeeding the late W. C. Winings. Sam DuPree, sales manager of Goodyear's molded goods plant at St. Mary's, Ohio, has become assistant manager of the mechanical goods division.

Richard Stroud, formerly general manager of Abbeville (S. C.) Cotton Mills, has become general manager of Excelsior Mills, Union, S. C., succeeding Peter Haynes.

Corry W. Lynch of Charlotte, N. C., has resigned his position as sales representative for The Stanley Works, with which company he has been connected for a number of years. He has not annouced his plans.

W. P. Smedley, formerly in charge of the Kingston, Pa., mill of Duplan Corp., has been appointed assistant vice-president in charge of all throwing production for Duplan. His duties now will entail the supervision of the five throwing mills of the company. . . . John Haesler has been appointed assistant vice-president of the firm. He joined the firm in 1921 after emigrating from his native Switzerland.

Dr. Frank H. Reichel, president of American Viscose Corp., has received the honorary degree of Doctor of Science from Allegheny College, Meadville, Pa., "in recognition of his accomplishments in the field of science."

OBITUARY

Gerrish H. Milliken, 69, president of Deering, Milliken & Co., died suddenly June 11 at Southampton, L. I., N. Y. Devoting his entire career to the textile industry, Mr. Milliken was one of the founders of the Association of Cotton Textile

Houghton Wool Tops

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STARCHES
for all Textile Purposes

1907 — 1947
40 Years of Friendly Service

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QUALITY • UNIFORMITY
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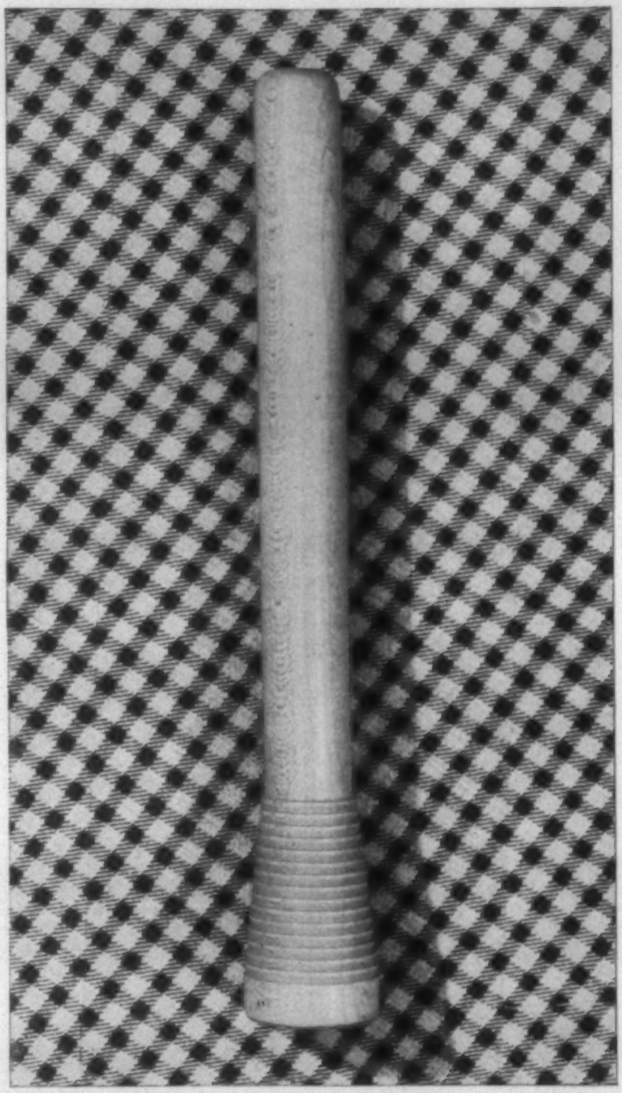

PRECISION BOBBINS

Engineered to operate perfectly on your own spindle. Complete control of every step in the manufacture from forest to finished product makes these bobbins true to their name—PRECISION.

Sales Representatives:

EMMONS LOOM HARNESS CO., Lawrence, Mass.

THE CHARLOTTE SUPPLY CO.
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Atlanta, Ga.

H. W. Curtis, 735 West Crescent Ave., Allendale, N. J.

NEW ENGLAND
BOBBIN & SHUTTLE CO.
George M. Hambleton, Gen. Mgr.
NASHUA, NEW HAMPSHIRE
Telephone: 2406

Merchants of New York. He was president of the association in 1922 and a member of the board of directors for many years. In addition to heading Deering, Milliken & Co., he also was president of Dallas Mfg. Co., Huntsville, Ala., Darlington (S. C.) Mfg. Co., Gaffney (S. C.) Mfg. Co. and Madison Woolen Co. Surviving Mr. Milliken are his wife and a son.

Arthur Birch, 83, founder and owner of Arlington (Mass.) Machine Works until his retirement in 1942, died June 5. A native of England, he came to this country in 1883 to introduce machinery for his father, the late William Birch, an inventor. He is survived by his wife, a son and two daughters.

George J. Swift, 65, vice-president of Leaksville Woolen Co., Inc., Charlotte, N. C., and formerly head of the blanket department of American Woolen Co., died recently. He founded Northern Textile Co. He is survived by his wife, a son and two daughters.

Mrs. Bertha Lindau Cone, 89, wife of the late Moses H. Cone, co-founder of Proximity Mfg. Co., Greensboro, N. C., died June 8 at Blowing Rock, N. C. Mrs. Cone established the Moses H. Cone Memorial Hospital Trust Fund of $15 million after the death of her husband.

James T. Broadbent, 73, former president of Standard Textile Products Co. and general manager of the Mobile and Selma Cotton Mills and Albion Kaolin units of Standard Coated Products, a division of Interchemical Corp., died June 1 in New Bedford, Mass.

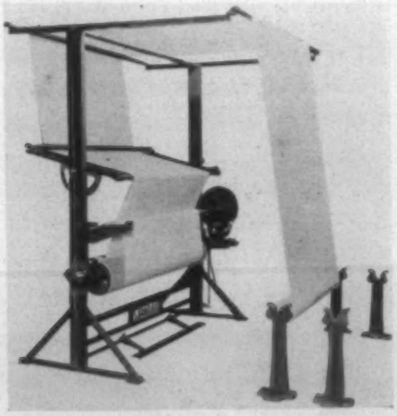
George E. Price, 57, purchasing agent for Goodyear Tire & Rubber Co., Akron, Ohio, and associated with the company for 25 years, died May 30. He was one of the founders of the New York Association of Purchasing Agents. He is survived by one son.

For the Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Improved Inspecting Machine Is Marketed

Standard Mill Supply Co. of Pawtucket, R. I., and its associated Southern Standard Mill Supply Co. of Charlotte, N. C., announce a new cloth inspecting, measuring and winding machine. The accompanying illustration shows the new machine's overhead through light inspection. The inspecting board is adjustable vertically or horizontally for any required angle. It is made of seven-ply hardwood. The machine can be equipped with a cloth roll and 15-inch knife when using paper tubes, or an expanding steel cloth roll not requiring a tube can be furnished.



Other features of the unit are listed as follows: all revolving shafts mounted in replaceable bearings; balanced measuring cylinder covered with Shur Grip rubber fillet; measuring clock graduated in eighths of a yard, mounted on one of the measuring cylinders; disc clutch drive of simple construction, permitting a slow start and quick stop.

E. F. Drew & Co., Inc., Opens Southern Office

E. F. Drew & Co., Inc., of New York City, with factory and laboratories at Boonton, N. J., announces the opening of a sales office for its textile specialties and allied products at 805 Woodside Building, Greenville, S. C.

W. H. Kirkpatrick, left, formerly connected with Westvaco Chlorine Products as divisional sales manager, has been appointed as manager of the new office and will be calling on the textile industry in the Southeast. This branch office is being established to serve this territory adequately with the firm's new synthetic esters, wetting agents, synthetic detergents, softeners, sulfonated oils, soaps and other specialties. Warehouse stocks will be kept in a central location for efficient and convenient service to the Southeastern mills.

Homer Bulletin Describes Firm's Magnetic Products

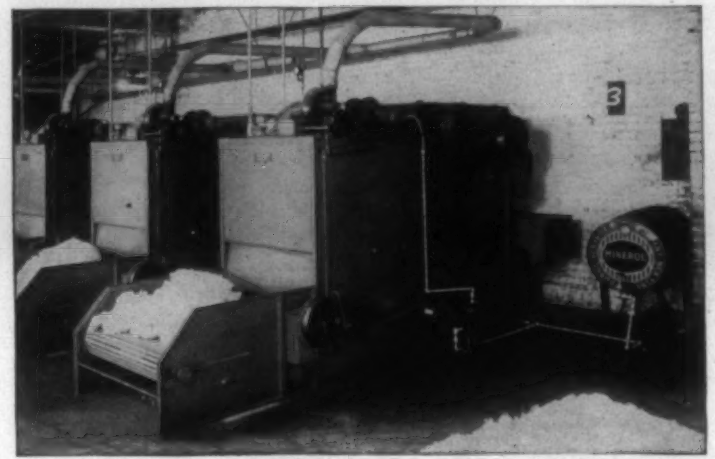
Homer Mfg. Co., Inc., Lima, Ohio, has just released a new six-page bulletin covering the Homer permanent magnetic separators and magnetic pulleys. The bulletin shows several different types of magnetic separators as well as magnetic pulleys, and is illustrated with a number of self explanatory application sketches. The bulletin is available upon written request to Homer Mfg. Co., Inc., Dept. T-26, Lima, Ohio.

Carbomatic Offers New Portable Singeing Unit

Carbomatic Corp., 24-81 47th Street, Astoria, L. I., N. Y., has added a new portable model to its line of gas-fired infra-red singeing units. Mounted on a movable platform, the unit can be shifted from place to place and adjusted to any position or heat focus. Such mobility often effects a saving in production time, says the builder, either when the unit is employed separately or as an adjunct to a permanent-fixed battery of infra-red singeing units. This unit, as illustrated, can be utilized wherever additional drying is necessary in a textile plant.

Heretofore, extreme flexibility in positioning has been associated with Carbomatic infra-red lamp units. The

MINEROL FIRST and FOREMOST CONDITIONING AGENT for Textile Fibres.



● **MINEROL** is a prepared agent for conditioning textile fibres..a systematic Process of Spraying Natural and Dyed Raw Stock. ● **MINEROL** helps to separate long fibres from the short. It saves *good fibres* and prevents waste. It makes fibres more supple..more pliable. ● **MINEROL** provides *control* of conditions caused by static electricity. It protects the cards and preserves the wire. ● **MINEROL** prevents Dust and Fly..safeguarding health and insuring better working conditions. ● **MINEROL**..as a conditioner is more urgently in demand thru the increased use of staple Cut Rayon and its varied combinations with cotton, wool and other fibres.

BRETON MINEROL PROCESS

BORNE SCRYMSER COMPANY

Originators of the BRETON MINEROL PROCESS for CONDITIONING FIBRE

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West Yarmouth, Mass.

W. M. DYNES
West Springfield, Mass.

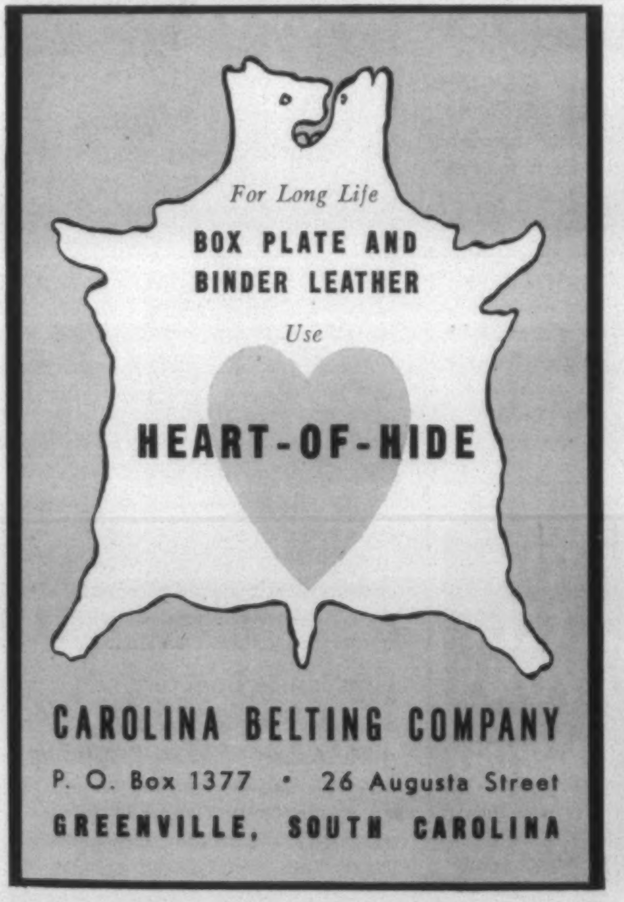
S. T. DOUGLAS, JR.
Westwood, Mass.

SOUTHERN REPRESENTATIVES

R. C. YOUNG, Mgr.
Charlotte, N. C.

JOHN FERGUSON
LaGrange, Ga.

W. E. SMITH
Charlotte, N. C.



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IDAHO *Potato Starch*

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It's the DARY STORY . . . a story that Spinners and Twisters everywhere know and trust.

It's about ring travelers that are not "just made" but processed (DARY PROCESSED) so that every performance of *every traveler* is 100% satisfactory! The story includes a DARY RING TRAVELER for every count or twist of yarn . . . whatever the spinning assignment or conditions!

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Get the DARY STORY "first hand" if you haven't yet learned it . . . ask to see the friendly Dary Representative nearest you. Do it *NOW!*

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new portable gas-fired unit has much the same degree of flexibility, yet offers the gas-fired advantages of closer precision and a more extended range in heat control, as well as a wider range of heat coverage. A self-contained unit —complete with blower, gas-air mixer and controls—it may be specified in various sizes of refractory.

Management And Labor Theme For New Book

Management and Human Relations in Industry, first volume of the *Labor and Industrial Relations Yearbook and Directory,* published by Industrial Relations Publishing Corp. of New York City, demonstrates that management and labor can co-operate, for the customers' (or consumers') good, and that this is the sole purpose of their relation. A symposium by 25 experts gives the reader tested methods of top management, the best of expert methods, sound ways to achieve stable human relations, methods to achieve enviable cost and production and price records, to build sound public labor relations and to serve the public interest intelligently.

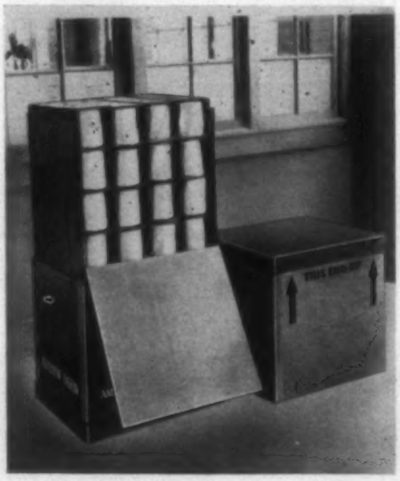
New Book Explains Portal-To-Portal Act

The Portal-To-Portal Act of 1947 (200 8½ x 11 pages; $5; published by the Bureau of National Affairs, Inc., Washington, D. C.) is the first book to dissect and analyze the new portal-to-portal law recently enacted by Congress, to tell what it means to more than 557,000 establishments covered by wage-hour standards, how it affects the nation's wage earners, what it does to existing portal pay claims which piled up since last November. Throughout the book the editors have been sharp in detecting the hidden advantages and pitfalls for companies and unions, and in pointing up the broad, general phrases and definitions which promise to lead to court suits and to considerable confusion. Styled in precise business English, the detailed analysis in the book can be understood by every person in any way touched by the provisions of the law.

Order Velvet Smooth
UNION TEXTILE CRAYONS
21 COLORS $8.00 ★ WHITE $7.10
PER CASE OF 4½ GROSS
UNION CRAYON CO.
LOWELL, MASS.

Rayon Packages Shipped In Improved Container

A corrugated fibreboard container that is non-returnable and has a number of other customer advantages is fast replacing the old-style wooden packing cases in which rayon cakes and cones have long been shipped from American Viscose Corp. The container has an inner carton and upper and lower section. Then the upper outer part is placed in position so that the two outer sections butt at the center. (See illustration.)



Sealed at all joints, the new container keeps out dust and soot in transit. If the outer carton is damaged, the inner one protects the rayon from harm and as a result customers report the yarn now arrives much cleaner and in excellent condition. Packed and handled in an upright instead of a horizontal position, the container saves floor space in packing, shipping and storing. Since it is smaller and lighter, even though it holds 96 cones, it saves not only space but dead weight.

Firm Issues Directory Of Suppliers Using Product

The makers of Johnson's Wax have just issued a new directory of top textile converters and suppliers who are offering fabrics finished with Johnson's Drax. This multi-colored booklet entitled "A Who's Who in Fabrics" is a ready reference of all resources supplying fabrics finished with Johnson's Drax. It is alphabetically arranged with complete branch office addresses, telephone numbers and trade names.

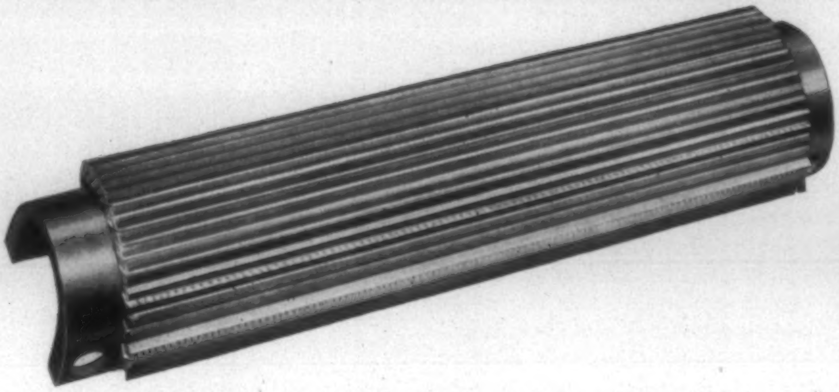
Copies will be mailed to retail buyers for department stores, men's and women's clothing stores and children's and infants' wear shops. Additional copies will reach manufacturers of rainwear, outer garments, men's and women's wear, sports wear, working clothes and others. Other copies are available upon request from S. C. Johnson & Son, Inc., Racine, Wis. Johnson's Drax is a new protective finish for all fabrics. It is resistant to many stains and soil, prolongs fabric freshness, and is water repellent, the company states. Merchants have found that it provides improved hand, keeps fabrics and garments fresh and new looking on shelves and racks, thereby reducing mark downs.

Name Agents For Duscot, Roll Covering Material

W. D. Dodenhoff Co. of Greenville, S. C., and Maywood, N. J., has been appointed exclusive sales representative for Duscot, new roll covering material developed specifically for the textile industry. One of the country's largest and leading research laboratories has pioneered this new product since initial experiments were undertaken in 1929. Exhaustive tests were conducted toward improving existing cot materials but this phase of the project was soon abandoned in favor of developing an entirely new material. Considerable progress was made with the advent of the new synthetic rubbers, while certain other refinements were added during the war years. In 1945 the work of the chemists and technicians was completed, and an intensive series of field tests were immediately begun. During the next two years Duscot was subjected to numerous endurance and performance tests under every possible operating condition on every existing type of frame. In one test conducted, cots of this material were still running well after 6,000 hours—without buffing. Several months ago the major portion of these tests was completed and Duscot was made available commercially for the first time.

The initial announcement by W. D. Dodenhoff Co. pointed out that these two years of steady running on a large

COMBER RENEEDLING



WHERE QUALITY OF PRODUCT

Skilled hands working with superior materials and precision equipment have set a high standard of quality on which you can always depend.

AND QUALITY OF SERVICE

The knowledge, experience and facilities that have come with over 30 years of serving the textile industry have equipped us to promptly and efficiently meet our customer's needs.

REALLY COUNT

The repairing and reneedling of half laps and top combs is an essential and important part of machinery maintenance. . . Your confidence and business is just as important to us.

GASTONIA COMBER NEEDLING CO.
GASTONIA, NORTH CAROLINA

Serving the South since 1914

production basis has established the following characteristics for Duscot. The material does resist oil and will not swell; it resists heat, having been successfully used in temperatures ranging from 40° F. to 120° F.; it resists abrasion and requires less regrinding since rolls do not groove; through a special technique of composition, it permits rolls to carry electricity, and thus materially reduces static electricity; it offers a controlled gripping surface which contributes to uniform drawing and maximum yarn strength; any regrinding can be done on standard cot buffing equipment; rolls do not lose their shape after a shutdown; it has a different composition than other roll covering materials in that Duscot is a homogeneous material, rather than particles of material held together by a binder. Without using highly technical terms Duscot can best be described as a chemical combination of a synthetic rubber and a plastic.

Additional information and details may be obtained by writing direct to the Eastern division of W. D. Dodenhoff Co., Inc., Maywood, N. J., or the main office, Greenville, S. C.

Onyx Products Described In Data Sheet Series

Onyx Oil & Chemical Co., Jersey City, N. J., recently has produced a series of data sheets describing certain of its products which are considered a worthwhile innovation in the textile field. The data sheets are factual, outlining in detail the major uses of the individual product involved; its technical advantages, performance data, application details where practicable, and its chemical and physical characteristics. Information contained in the data sheets should prove of special interest to the dyer, bleacher and finisher.

Brown Will Continue On Firm Price Basis

Despite steadily increasing labor and material costs Brown Instrument Co., Philadelphia, Pa., will continue to operate on a firm price basis in the sale of all its products, it was announced by L. M. Morley, vice-president and general sales manager of the company. "Through intensified cost reduction and installation of automatic machinery we found a few months ago we could quote on a firm price basis," said Mr. Morley. "We eliminated the escalator clause on our equipment at a time when the industrial picture was particularly unstable. We felt that the Brown Division of Minneapolis - Honeywell Regulator Co. could contribute to correction of uncertainties which were unbalancing the cost and price situation." Industry's response to the company's action, Mr. Morley added, has indicated that purchasing interest can be quickened and stabilized, wherever possible, by elimination of price uncertainties.

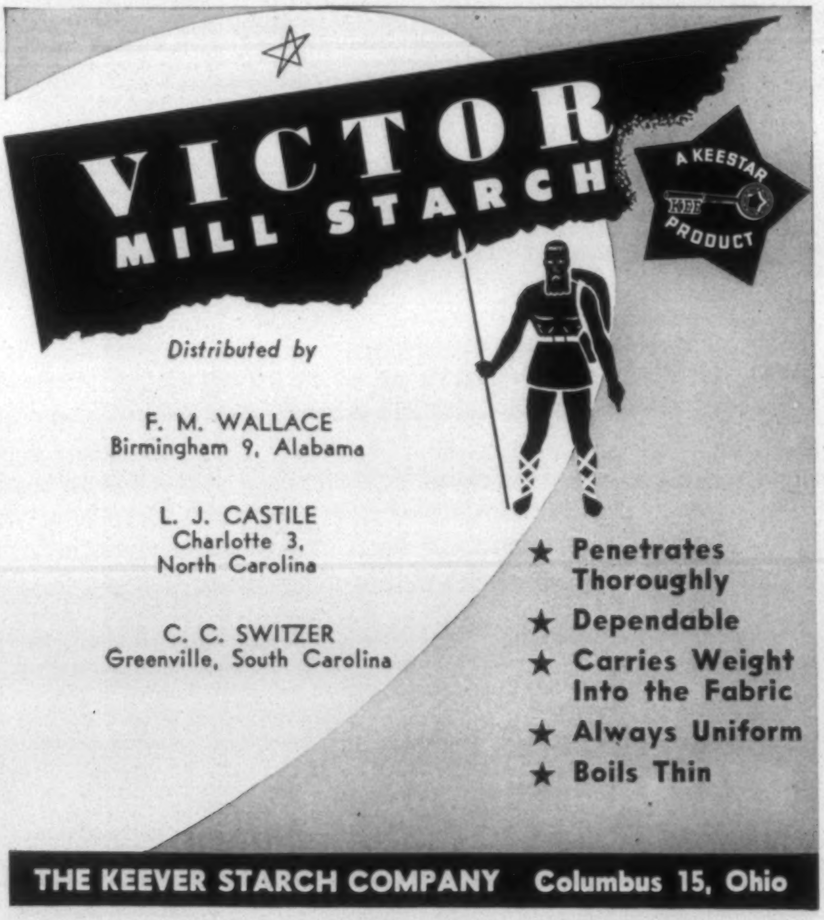
Hardaker Firm Expanding Activities In Charlotte

Construction began recently in Charlotte, N. C., of a large building which will serve as the headquarters of greatly expanded operations in Charlotte of John T. Hardaker, Inc., of Bradford, England, manufacturer of Jacquard machinery for the textile industry. The new building will be 78 by 100 feet in size and is expected to be completed by Oct. 1. The company at present assembles Jacquard machinery in Charlotte but when it moves into the new plant it will manufacture machinery for customers in the United States, South America and Canada. Leslie A. Heath, a director, vice-president and treasurer of the company, is in charge of the Charlotte operations, and William Foster is production manager. Roland A. Allerton, an engineer, is scheduled to arrive from England in the fall as secretary of the firm, which is headed by Harold Hardaker of Bradford.

Cloth Calculations Theme Of Book By L. H. Jackson

Textile Book Publishers, Inc., announces publication of a new book which it believes will be of inestimable value to textile students and engineers, technologists, yarn spinners, buyers, technicians and others in the industry. Title of the book is *Yarn and Cloth Calculations,* and the author is Lloyd H. Jackson, M.S., a graduate mathematician and textile engineer, formerly an associate professor in the department of textile engineering, Texas Technological College, Lubbock, Tex.

Yarn and Cloth Calculations is a text book, complete, well-arranged and technically accurate. It covers the subject in a logical order, taking up, first,



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yarn numbering systems, then yarn conversion, ply yarns and resultant counts and gray cloth calculations. Warp, filling and cloth calculations are worked out in detail and a whole chapter is devoted to the theory of fabric construction. It gives complete details of fabric construction analysis, including the factors to be determined and equations to use. A series of relevant problems follow most of the chapters and practical equations are included to cover almost every processing step. The book is priced at $6 in the U. S. and Canada and $7 in foreign countries.

Booklet Describes Uses Of Versatile Paraplex Resins

A new booklet on the properties of certain plasticizers and modifiers for polyvinyl chloride, the vinyl copolymer resins and elastomers of the acrylonitrile-butadiene type is now being made available by the Resinous Products & Chemical Co. of Philadelphia, Pa. Discussing two of the company's important plasticizing resins, Paraplex G-25 and G-40, the booklet provides valuable information on the properties of these non-migrating resinous polyesters and their use in such industrial applications as free films, extruded compounds, cable lacquers, fabric and paper coatings, gasket stocks, can linings and closures, and cements and asphalt compounds. The new booklet *Paraplex G-25 and G-40* may be obtained by writing the Resinous Products & Chemical Co., Washington Square, Philadelphia 5, Pa.

Holyoke Begins Activities In Pressure Filter Field

Holyoke (Mass.) Machine Co., known in the textile industry for Holyoke cotton calender rolls and other heavy machinery, announces its entrance into the gravity and pressure filter field. Under new and progressive management this is just one of the post-war developments Holyoke has in store for old and new customers.

When it was learned last October that Norwood Engineering Co. could no longer furnish repair parts of additional beds for Holyoke equipment, it was decided to help such customers. The necessary tools, jigs, fixtures, patterns, etc., were acquired together with some of the former Norwood personnel. At the same time a survey of the filter business was made, the results of

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PRODUCTS of unsurpassed quality and performance, plus an experienced knowledge that knows how to recommend their use for practical results—is convincing more mills, day by day, that NORTH is the place to turn for service and supply when changing conditions require new and highly specialized products to meet the problem at hand. Our men are trained in practice; not in theory. Our products pass the same exacting test.

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which indicated there was a definite place for Holyoke in this field. The services of more of the industry's best known filter engineers were then obtained and a filter department established under the direction of John W. Gaitenby.

With an able staff of engineers on deck and experienced help all along the line, plans were carefully completed so when the time arrived Holyoke could offer users of gravity and pressure filters years of "know how" streamlined for modern times and conditions. The firm will specialize in filters for the paper and textile trade, municipalities, swimming pools and soft drink bottlers.

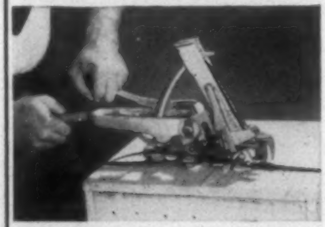
Monsanto Establishes Sales Office For State Of Texas

Establishment of a sales office for the state of Texas, with Harvey M. Harker as general branch manager, was announced June 16 by the Monsanto Chemical Co., St. Louis, Mo. Headquarters of the new office, which will handle the company's products other than phosphates and plastics, will be in Houston. Harker, who was first employed by Monsanto in 1918 as an assistant plant manager, rejoined the company in 1926 as director of purchases. He has been assistant general sales manager of the Organic Chemicals Division at St. Louis since 1931.

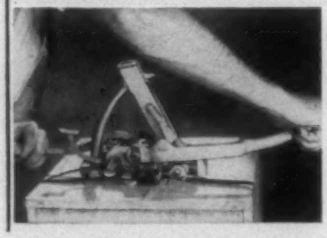
4 steps...5 seconds!

1 Free end of strapping is slipped under straplock and against stop.

2 Loop of strapping is slipped under straplocks and between sheer blades and pulled tight.



3 Strapping is tensioned by bringing tightening handle back to horizontal position.



4 Strapping is cut and seal crimped by moving sealing lever forward.

that's production strapping with the improved Stanley "ACE" Strapping Tool

● ALL THAT takes just 5 seconds. Positive spring feed holds a 100 seal clip in magazine for 3/8" and 1/2" seals and a 75 seal clip for 5/8" seals. The "Ace", with a complete line of accessories, is available in 3 sizes to handle the whole range of strapping jobs. Write for full details or demonstration. The Stanley Works, Steel Strapping Division, 201 Lake Street, New Britain, Conn.

STANLEY

STEEL STRAPPING AND CAR BANDING SYSTEMS

Assisting Mr. Harker at the new sales office will be Kenneth O'Connor, who will be in charge of office operation. Mr. O'Connor joined Monsanto in 1942 as a member of the Organic Chemicals Division order department.

Staley Directors Approve Large Expansion Program

Final approval was given June 12 by the board of directors of A. E. Staley Mfg. Co., Decatur, Ill., to a $10,835,000 modernization program. Engineering work on new facilities which would make possible a 50 per cent increase in the corn grind, to 75,000 bushels daily, is continuing.

"The board felt it was not necessary to make a final decision now on the expansion portion of the over-all program," A. E. Staley, Jr., president of the company, said. "The modernization of the starch and corn syrup plant, involving considerable re-arrangement, must be completed before the expansion can be undertaken. In view of this and the present high level of construction costs, the board decided to defer final commitment on the expansion phase of the program." Modernizing the plant, to make it the most efficient in the industry, will involve substantial improvements in the present steep house, complete revamping of the mill house, elimination of table house operations and modernizing of the corn oil house. The process for producing modified starches, particularly for the paper and textile industries, will be streamlined and increased somewhat in capacity.

Alrose Process Controls Both Cottons and Rayons

A new, wholly-chemical process that makes it possible for the first time to control shrinkage in both rayon and cotton textiles with a single formula is announced by Mark Weisberg, president of Alrose Chemical Co., Providence, R. I., developers of the process. Called Definized G, to differentiate it from the Definized process of shrinkage control for rayons only, the new process is equally successful when applied to cottons, rayons and cotton mixtures with rayons and acetates, regardless of weight or width, it is claimed. It will be distributed, as is Definized, by the Aqua-Sec Corp., 1450 Broadway, New York City.

Successful commercial runs on thousands of yards of fabrics at several finishing plants have shown that residual shrinkage on both cotton rayon mixtures is restricted to within one per cent when the Definized G process is used. These tests have shown also that tensile strength and abrasion resistance of cottons and rayons are unaffected by Definized G, and the process can be used with success on white or dyed goods.

Technically, the process is based on the use of glyoxal combined with newly-discovered catalysts that do not discolor the treated fabrics. The process, which is available to all Definized rayon shrinkage control licensees, is applied on standard rayon finishing equipment. The glyoxal solution and the new catalysts are applied on a padder and dried. To complete the reaction the fabric is then given a cure for three to six minutes at temperatures ranging from 270 to 350° F. Next step is to wash, dry and frame the fabric to a predetermined finished width.

The chemical used in the Definized G process differs from the caustic Definized method in that it modifies the chemical structure of the fabric and thus sets fabric dimensions. The new process will not replace the caustic Definized process, according to Mr. Weisberg, but rather will supplement it.

Textile Equipment Plant Suffers Heavy Fire Loss

A new building program is underway at the J. C. Paddock Co. in Spartanburg, S. C., which was severely damaged by fire June 9. Flames caused a loss estimated at between $35,000 to $50,000 to the plant which manufactures textile hand trucks and quill cans, as well as various other items of textile equipment. J. C. Paddock, owner-manager of the firm, expects to reopen production probably in August.

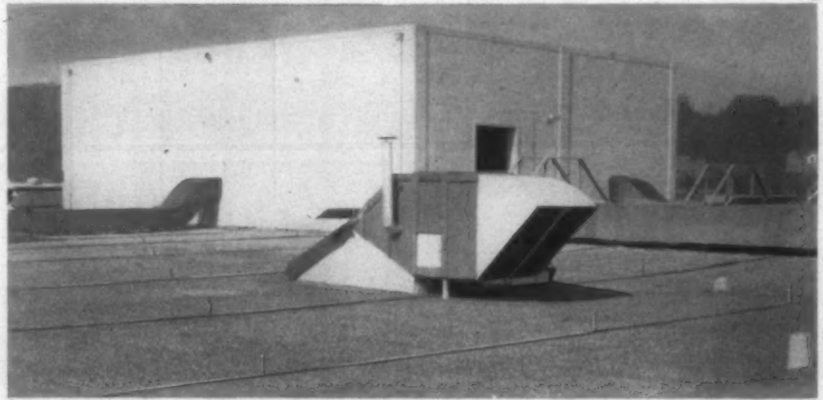
New pH Test Kit Is Now Available For Industry

R. P. Cargille, 118 Liberty Street, New York City, has announced the availability of a new pH test kit containing 19 Hydrion pH Test Papers in 18 plastic dispensers, all in one convenient case. This complete assortment covers the full range from pH 0.0 to pH 14.0, and distinct color changes can be obtained within 0.25 pH unit of almost a point of interest on the pH scale. Eleven of these papers are released for the first time. The complete assortment is listed as Hydrion Set H-20; price $20.

AMAZING—BUT TRUE!

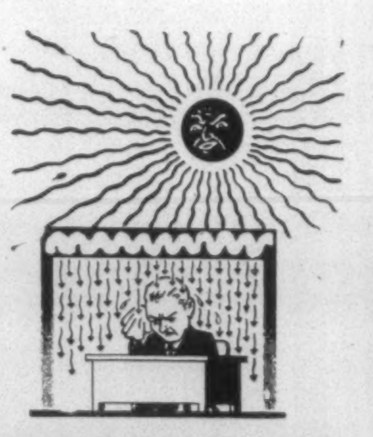
THE HOT RAYS OF THE SUN COOL YOUR ROOF WITH THIS "APRIL SHOWERS" SYSTEM

Yes—it's unbelievable but true! The hot rays of the sun are converted into a powerful source of cooling for your buildings, by the "April Showers" system, just as pictured at left. Crazy? Not at all! It does this by covering your roof with a film of moisture at all time. As moisture evaporates, it absorbs heat, thus the hotter the sun, the more efficient your cooling system. This is the first successful application of the principle of "radiant cooling." April Showers cools your roof from 150 degrees to between 73 to 90 degrees, depending on relative humidity.



U. S. PATENT OFFICE, Richmond, showing one-third the area sprayed by AUTOMATIC APRIL SHOWERS SYSTEM.

Without the April Showers System, as at right, your ceiling in summer acts exactly as though it were filled with steam pipes, due to heat absorbed from the roof, which will be as high as 150 degrees. With April Showers intercepting this solar heat, your room temperature is comfortable. There are many other features you'll like about this system—call on us or phone and let us discuss it with you. You'll be glad you did.



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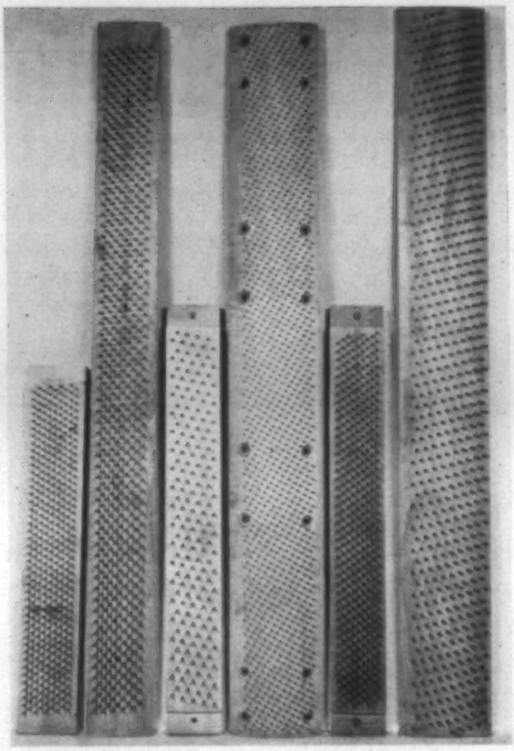

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For all makes of Pickers, Openers, Breakers, Waste Machines, Garnet Machines.
We rebuild old aprons, especially spiked aprons where the fabric and belting has worn out. Let us save you money on this work.
All standard aprons, both new and reworked.
Kirschner Beater Lags.
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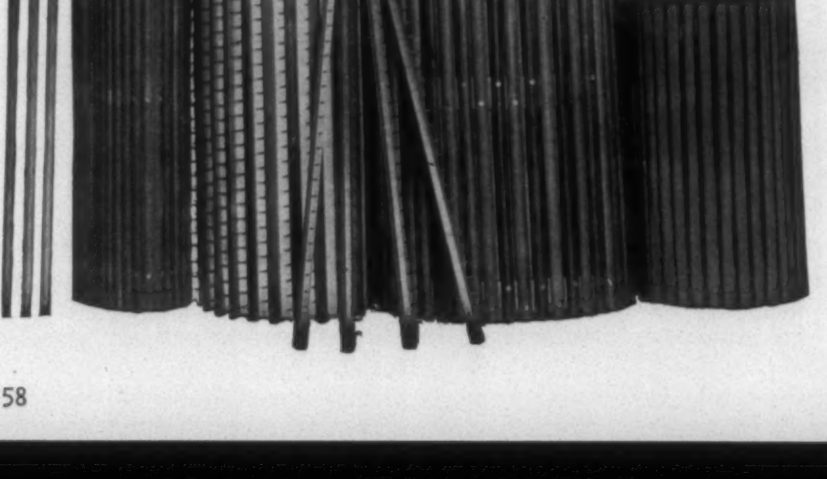

Prufcoat Aluminum Paint Has Many Industrial Uses

Performance-proven in some of the most critical corrosion areas in America's leading chemical plants, both inside and outside, Prufcoat Aluminum, a product of Prufcoat Laboratories, Inc., Cambridge, Mass., is now available for all general maintenance painting. Made with Prufcoat's corrosion-proof, synthetic resin vehicle and a special aluminum powder that leafs remarkably well, Prufcoat Aluminum is said to offer many advantages not obtainable with ordinary aluminum paint. Each particle of aluminum powder is encased in Prufcoat's special acid, alkali and water-proof synthetic resin vehicle. Since aluminum is acted upon by both acids and alkalis, and since there always are at least some traces of chemicals in the atmosphere of every industrial plant area, this encasing of the aluminum particles in Prufcoat protects the leafed aluminum from any dulling, corrosive effect.

The leafed aluminum particles plus the polymerized Prufcoat vehicle, in addition to providing positive protection against acids, alkalis and water, seal-in all average surface conditions. No other surface preparation is required than what is advisable before painting with ordinary paints. Thus, Prufcoat Aluminum can be satisfactorily applied to any general maintenance surface that is dry and reasonable free of rust and foreign material (oil, grease, tar and asphalt). The resultant Prufcoat Aluminum coating, in addition to sealing-in all average surface conditions, keeps all moisture and other corrosive agents from reaching the surface, and provides double-action protection. The volatile solvents in Prufcoat Aluminum evaporate sufficiently within a few minutes after application to leave the coating dry to the touch, it is claimed. Thus, with Prufcoat Aluminum, a painter painting outside storage tanks, fences, roofs, sheds, etc., never needs to worry about changes in weather. It can rain within a matter of minutes after the paint has been applied with no adverse effect upon the finished Prufcoat paint job. This fast air-drying characteristic also makes Prufcoat Aluminum unusually interesting for production line painting where it is desired to paint sheet metal products and either keep a production line moving or handle the painted product within a matter of minutes. Further information concerning how

Prufcoat Aluminum cuts maintenance costs when used for all general maintenance painting may be secured by writing Prufcoat Laboratories, Inc., 63 Main Street, Cambridge, Mass.

Booklet Cites Uses Of New Granular Germicide

Marketing of an improved granular germicide and disinfectant has been announced by the Columbia Chemical Division of the Pittsburgh Plate Glass Co., Pittsburgh, Pa. Composed essentially of a stabilized calcium hypochlorite the new product has been named Pittcide. It shows no appreciable loss of strength in its bactericidal and deodorizing properties even over long periods when the container is closed. An outstanding quality of Pittcide is that it permits the germicidal action of chlorine to be employed surely, safely and easily. This new product is soluble in either warm or cold water.

A special booklet on the multiple uses of Pittcide has been prepared by Columbia. Details of the correct Pittcide solution strength for 162 applications in 17 major fields are included. Individual application details explain surface cleaning, method of applying, proper materials for applying and similar information. Copies of this informative booklet may be had by writing Dept. P, Pittsburgh Plate Glass Co., Columbia Chemical Division, Fifth and Bellefield Avenues, Pittsburgh 13, Pa.

Develop Method For Testing Maturity Of Cotton Fibers

Chemists at the Department of Agriculture's Southern Regional Research Laboratory in New Orleans, La., have developed a differential dyeing procedure which demonstrates the maturity of cotton fibers. It is based on the facts that mature cotton fibers are thick-walled and immature ones thin-walled, and that thick and thin-walled fibers take the same dyes differently and also take different dyes. The test is easily made on unprocessed cotton lint in laboratory dyehouse. When fully perfected it should have wide usefulness. A mixture of dyes of contrasting colors, red and green, and of different dyeing properties, is used in a standard method of dyeing. The thick-walled, or mature, fibers dye definitely red, whereas the thin-walled fibers, commonly called immature, dye a distinct green. As a result, differentiation is easy.

From out of the test tube comes

A Completely NEW AND IMPROVED ROLL COVERING

HERE'S THE STORY

RESEARCH: As far back as 1929 one of the country's largest and leading research laboratories began work on developing a new—a better roll covering. Attempts to improve existing cot materials were of no avail, but exhaustive tests did establish the basic requirements for a superior cot.

DEVELOPMENT: With the advent of the new synthetic rubbers a vigorous project was launched to develop a completely new material that would meet the basic requirements already established. At long last the chemists and technicians produced a material that met every single requirement for a superior cot.

TESTS: That alone was not enough. Detailed field tests were immediately begun, and for over two years now this new cot has been tested under every conceivable operating condition—on every existing type of frame. In one test these cots were still running after 6,000 hours—without regrinding.

Easy to Apply

"DUSCOT*"

*A NEW Synthetic Rubber Cot scientifically discovered, developed and tested specifically for the textile industry.

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DUSCOT Does . . . . .

RESIST OIL—No swelling to cause concave surface. The face remains parallel.

RESIST HEAT—No change in the character of the rolls due to heat. Successfully operated from 40° F. to 120° F.

RESIST ABRASION—No frequent regrinding since rolls don't groove. Far less ends down.

REDUCE STATIC ELECTRICITY—A special technique of composition permits rolls to conduct electricity. That means far less static electricity—a minimum of lapping up.

OFFER A UNIQUE SURFACE—A controlled gripping surface guarantees uniform drawing and maximum yarn strength.

HOLD ITS SHAPE—After a shutdown rolls do not become flat.

HAVE A DIFFERENT COMPOSITION—The rolls are homogenous throughout—not particles of material held together by a binder. Fibres meet ONLY a uniform surface.

"DUSCOT" ROLL COVERING MATERIALS *have an outstanding performance record in over two years of exhaustive field tests under actual operating conditions.*

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POSITION WANTED

as overseer of throwing or preparation department. Age 45. Now employed by large rayon weaving plant in the South, but desire change. Have had 12 years' experience on winding, spinning, redrawing, twisting and quilling on crepe, voile and combination yarns. Available about August 1st. Best of references.

Write "Rayon Weaving,"
care Textile Bulletin,
P. O. Box 1225, Charlotte 1, N. C.

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WANTED—Position as General Overseer. Experienced on carding, spinning, twisting, winding and finishing. Prefer Alabama or vicinity. Employed. Address "Alabama," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Overproduction Of Yarns Cuts Profit Margin

Owen Fitzsimons of Charlotte, N. C., president of the Carded Yarn Association, reported recently that overproduction has led to a serious reduction in profits of spinning mills, adding that profit margins in some yarn brackets have shrunk to the irreducible minimum, if not into the loss column. At a time of "unprecedented prosperity" in the country, Mr. Fitzsimons stated, the yarn mills had produced too much even though raw cotton prices had increased with the end of O. P. A., wages in the industry have gone up and cost of repairs and supplies have advanced. He commented further that the carded yarn industry in the past has been confronted with "the same problem, which will require the same individual action to rectify it. But, this time, we have a firm foundation to build on."

International Exposition Termed Successful

Latest developments in textile fibers, fabrics and finishes were shown to the industry at large, and interested public, at the First International Exposition of Textiles, Trimmings and Factory Equipment held during the first two weeks of June at Grand Central Palace in New York City. Response to the initial event was described as enthusiastic and attendance was large throughout. More than 350 firms representing the billion-dollar American textile-apparel trade and 107 exhibitors from Italy, France, Holland, Switzerland, Great Britain and Belgium contributed to the two-week showing.

American exhibits emphasized new designs and dramatized the strides made in producing attractive, durable fabrics, while foreign countries sent displays of luxurious materials woven in their factories since the war's end. The fine craftsmanship and quality fabrics which represent the advancements made by foreign mills since the end of the war comprised the fourth floor exhibits. Making their first bid for reopening trade relations with the United States as well as establishing international markets abroad, the exhibits served to introduce the European techniques and novel fabrics to this country.

The largest contingent of exhibitors included the 56 representatives of Italy who exhibited the lavish silks designed and created in Como. Also included were woolens, laces, lingerie and millinery. The second largest group were the 17 French exhibitors for whom noted couturiers created special models in printed silks, velvets and novelty fabrics to be shown at the International Expsition of Textiles. New elastic fabrics, sewing threads, lingerie and other special styles typifying the French lines were included.

Holland, which is rapidly replacing Berlin as the apparel capital of Europe, had a comprehensive showing of dresses, coats, children's wear, lingerie, blouses, scarves and rainwear made mainly of rayons, woolens and cottons produced according to the specifications of the Netherlands textile manufacturers. Tapestries and carpeting were also presented.

The importance of cotton in all types of apparel was dramatized in the Cotton-Textile Institute booth. Highlighting the theme, "It's Cotton Four to One," the booth portrayed the multiple activities of the institute in the promotion of cotton products.

Representing a U. N. for the world of textiles, apparel and allied phases of the industry, the Internation Exposition of Textiles dramatized the beauty, skill and practicality of the products of wartime research and peacetime advancements made in the laboratories and design rooms of the industry. Some firms took orders while others who were sold up reported they exhibited to keep their name before the public. All agreed that the exposition far exceeded their fondest expectations and paid tribute to Arthur Tarshis, president of the sponsoring corporation, for the success of the show.

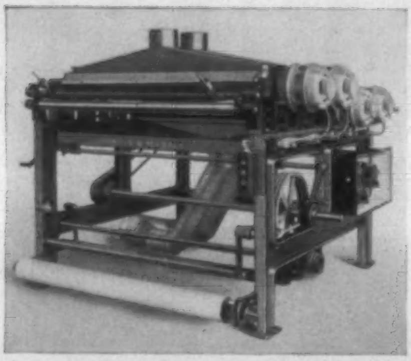
S. T. A. Has Final Spring Divisional Meeting

(Continued from Page 28) you have to keep on training people in economy of time and effort. One of the problems that gives me a headache is to give a course over and over without its becoming monotonous. For instance, we are giving a course in job relations. Job relations go on whether your training program does or not. We have to find out how to make the course interesting.

In training the worker how can we give him not only the skills and knowledges he needs but also develop in him the right attitude? We can go on and teach a man the mechanical movements of weaving or loom fixing, but he will not be a good weaver or a good loom fixer unless we build into him certain attitudes towards his work. A word we use around here is *integrity*. We have to build that into a man or develop what he already has. Teach the man that the honest thing is an honest day's work for an honest day's pay, building in him a pride in workmanship, a pride in quality, and a sincere devotion to his group and to his company, and a sincere appreciation of the part that he is playing in making this the most productive nation in the world. I do not know how much attention we give to attitudes. I doubt if we give very much in our training.

Let me sum up. I have been trying to give you some observations that I have run into in a very brief acquaintance with the industrial training problem. They are based on knowledge I have from other situations and on observations I have made here and in visiting other concerns. I think we should use experimental findings in planning our training. We ourselves should do experimental work. We should tailor-make our own programs rather than depend on canned programs. Next, training is a line function and not the function of the staff. It is necessary to select and train instructors carefully. We are going to have to keep adequate records of training to evaluate the learner's progress as well as to evaluate the training program. Training in an industrial organization is a continuous thing. Finally, we have to train workers not only in skills and knowledges but train them in attitudes and in good industrial citizenship and good American citizenship.

The prediction that rayon, which in 25 years has grown from little more than an experimental venture to an industry of the first magnitude, may see new growth in the fabrics field through blending with nylon, was voiced recently by F. R. Brown, director of sales for the rayon division of E. I. du Pont de Nemours & Co. Mr. Brown, addressing the second annual post-war sales conference of the Du Pont nylon division held at the Martinsville, Va., nylon plant, reviewed the history of man-made fibers. His remarks about rayon and nylon finding their own places in the textile field bore out the theme of the conference regarding the blending of synthetic and natural fibers and synthetic with synthetic fibers in the manufacture of fabrics that will reflect credit to every fiber used.



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Aid To Greece Brings Orders For U. S. Firm

Since legislation for U. S. grant-in-aid to Greece was passed, Oscar Kohorn & Co., Ltd., New York engineering firm and rayon machinery manufacturers, have obtained the first large-scale contract to rehabilitate one of Greece's basic industries—the country's only synthetic fiber plant of the Etma concern in Athens. The Greek concern has ordered $1,000,000 worth of filament rayon and staple fiber equipment, and has sent engineers to study rayon production in the United States.

At Ankara, the government-controlled Sumer Bank, which operates Turkey's only rayon plant, is studying American rayon production methods and sending technicians to this country. Sumer Bank officials last April told a representative of the Oscar Kohorn Co. that America's financial aid is causing a reorientation towards U. S. suppliers in Turkey, to a degree unknown even immediately after the war.

In industry-conscious Egypt, a combined rayon, staple fiber and cellophane plant is taking shape under the leadership of the aggressive Misr group (banking, textiles, chemicals, aviation). The largest construction project in the Near and Middle East (excepting only the Suez Canal), Societe Misr Pour La Rayonne S. A. E. shares were oversubscribed 20 times when offered on the Cairo market last year. Oscar Kohorn & Co., Ltd., which is supplying the machinery and technical management of the plant, obtained the dollar exchange for this $8,000,000 project from the Egyptian government—and production of rayon will commence this year. At the present time, the Kohorn Co. is also constructing one of the world's largest rayon plants in Brazil; others are in Chile, Peru, Czechoslovakia and China.

Greenville Show Set For Fall, 1948

W. G. Sirrine, president of Textile Hall Corp., said recently that the 15th Southern Textile Exposition will be held at Greenville, S. C., in the fall of 1948. Some of the former exhibitors will not participate, but a number of companies who have not taken part in previous shows have applied for space. The officers and directors see no reason why these expositions shall not be continued in Greenville. The definite date will be announced within the next two weeks.

Permit Imports Of More Long Staple Cotton

President Truman on June 9 signed a proclamation effective after five days permitting entry of a supplemental import quota of 23,094,000 pounds of "extra long staple" cotton to care for manufacturers' requirements until the regular annual quota for the next year opens on Sept. 20, 1947. The effective date of the proclamation is June 14. However, that day is Saturday and the next day Sunday on both of which days custom houses are closed. The Tariff Commission is informed by officials of the Bureau of Customs that arrangements have been made for entries under the supplemental quota to be made simultaneously at custom houses throughout the country on Monday, June 16, beginning at 12 noon, Eastern standard time. The supplemental 23,094,000 pounds mentioned above is not allocated by countries. It applies only to the current quota year ending Sept. 19, 1947, and only to cotton $1\frac{3}{8}$ inches or more but less than $1\frac{11}{16}$ inches in staple length. Supplies of domestic cotton under $1\frac{3}{8}$ inches in staple length. Supplies of domestic cotton under $1\frac{3}{8}$ inches in length are ample; cotton $1\frac{11}{16}$ inches and longer is not subject to import quota limitations. The President's action, based on authority under Section 22 of the Agricultural Adjustment Act of 1933, as amended, followed the majority recommendations of the Tariff Commission. Commissioner Brossard recommended a quota of 13,621,000 pounds.

The annual long-staple cotton quota for 1946-47 (45,656,420 pounds) was filled last November. Since then mills have been entirely dependent on existing stocks in the United States. In past years, domestic requirements for "extra long staple" cotton were supplied largely by imports chiefly from Egypt. This season mills have been forced to rely even more on imported cotton. With dwindling crops of SxP (American-Egyptian) and Sea Island cotton, stocks of domestic cotton $1\frac{3}{8}$ inches and more in staple length have shrunk almost to the vanishing point. This depleted stock situation coincides with increased demand for types of sewing thread and specialty yarns which can be made only from fine, long staple cotton. Stocks of such cotton, foreign and domestic combined, are inadequate to continue the current rate of mill activity until additional supplies become available under next year's quota or from the new domestic crop, should that prove to be substantial. Under the new supplemental quota, Karnak cotton from Egypt, Pima cotton from Peru, and possibly Sakellaridis cotton from the Sudan are expected to ease the plight of many manufacturers threatened with reduced output for lack of suitable cotton.

The commission's investigation was limited to a study of the needs for the current quota year. Inquiry at this time into the long-term needs of the domestic textile industry was thought inadvisable because current consumption, especially of the extra long staple cotton, is unusually large. It was considered that the pent-up demand resulting from wartime scarcities of civilian goods may account for the unusual mill activity, and that after the backlog is disposed of the needs of the mills for long staple cotton may be less than at present. A limited number of mimeographed copies of the complete report of the Tariff Commission (102 pages), including the commission's findings and recommendations as sent to the President, and a summary of the information obtained in the investigation, is now available.

International Cotton Queen To Be Chosen

Cotton belt beauties from 17 states have been invited to compete for the title of International Cotton Queen at the Lions International convention at San Francisco, July 30. Carlos L. Wilson, Memphis, general chairman of the Lions Cotton States Jubilee committee, has advised all of the 1,600 Lions Clubs of the South and Southwest of the opening of the 1947 state cotton queens contest. All clubs in cotton-producing states are eligible to enter girls in the contest from which 17 state queens will be chosen. Girls must be residents of a cotton-producing state between the ages of 17 and 25, and must never have been married. Closing date for the contest is midnight, June 20. State winners will be advised of their selection on June 26, Wilson said. The state winners will journey to San Francisco where they will compete for the title of 1947 International Cotton Queen.

The International Cotton Queen contest is to be held in conjunction with the annual Cotton States Jubilee.

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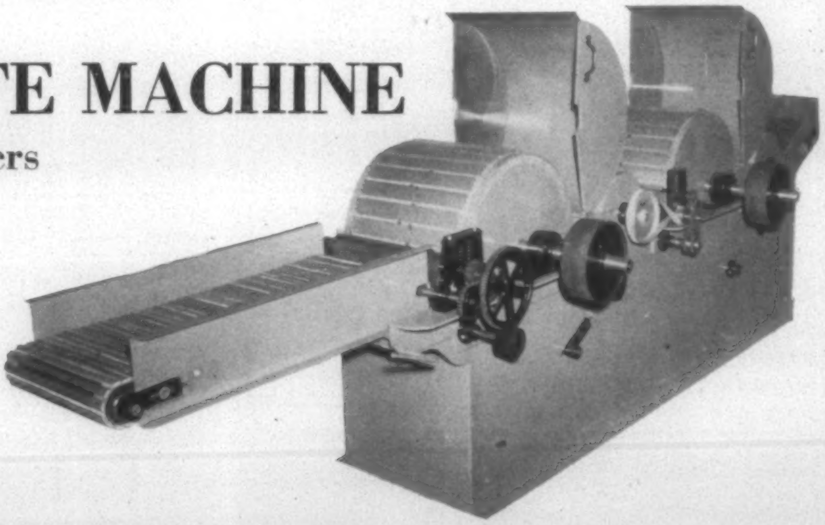

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Rayon Production Figures Listed By Journal

Shipments of rayon and staple in May totaled 78,300,000 pounds, an increase of eight per cent over the corresponding month last year, according to the June *Rayon Organon*, statistical publication of the Textile Economics Bureau, Inc. Shipments for the first five months of the year aggregated 381,800,000 pounds, an increase of eight per cent over the January to May period of 1946.

With the United States leading the way, world rayon capacity this year will grow to 2,700,000,000 pounds and if raw materials were available, output could come close to the peak production of all time, which was 2,825,395,000 pounds in 1941. The estimate for total world capacity is based on projected increases announced by several countries and includes also the potentially large operable capacity available in Germany, Italy and Japan. Major repairs, if effected in Germany and Japan, would increase the total operable capacity of rayon yarn and staple by an additional 250,000,000 pounds. The capacity figure is significant, it is pointed out by the *Organon* in a thorough analysis of world production, because it indicates the potential output which will be available when the world economic situation gets back to somewhat normal figures. It is also noted that the actual 1946 world production of rayon represented only 62 per cent of this potential capacity.

In an analysis of 1946 rayon production throughout the world, the *Organon* points out that the 1,671,655,000 pounds which were produced represented an increase of 18 per cent over 1945 but still remains 41 per cent below the peak 1941 level. For the second consecutive year, the United States led the world in the output of both rayon filament yarn and staple. Rayon production in South American countries continued to expand and the output in Europe showed substantial increases in some countries and declines in others. Activity in Japan showed only a slight improvement over the 1945 level. In the rayon export trade, the United States was second only to Great Britain and then only by a comparatively small margin.

In filament yarn production, the world total of 1,102,655,000 pounds showed an increase of 22 per cent over 1945 and 5½ per cent above the pre-war 1935 to 1938 average. Most noteworthy was the progress made by Belgium, Finland and Sweden, all three of whom set an all-time record in filament yarn production. Output in France during 1946 was double that of the previous year and was exceeded only by the 1941 and 1942 figures. Great Britain production increased 26 per cent over 1945 and was slightly above the 1934-39 average. Italian yarn output was almost 20 times the abnormally low 1945 level, and filament yarn production in the Netherlands was over five times that of 1945. Spain's production was the second highest on record, showing a 35 per cent increase over 1945.

World rayon staple production last year, amounting to 569,000,000 pounds, was 10½ per cent above 1945 but 63 per cent under the 1941 record. New all-time outputs, however, were established by Belgium, Czechoslovakia, Great Britain and Spain. Excellent progress was also made by Finland, France, the Netherlands, Sweden and Switzerland in raising production above 1945. Gains by these countries, however, were offset by the low production levels in Germany, Austria and Rumania, brought about by the critical raw material and labor shortages, and other difficulties.

In Russia, the total rayon production in 1946 is estimated at 5,000,000 pounds, a figure considerably below the 33,000,000-pound peak in 1940. From fragmentary reports, it is evident that pre-war Russian rayon industry was almost completely demolished during the war owing to the fact that the greatest part of the industry was in the areas overrun by the Germans. Output reported for both 1945 and 1946 was believed to have come from the former Finnish plant seized in 1944. Reports indicate that the Soviet Union intends to recreate its rayon industry under the latest five-year plan. A program for the building of facilities to produce an estimated 225,000,000 pounds of rayon annually by 1950 is understood to be under way. The project contemplates restoration of those plants destroyed during the war and construction of three additional filament yarn plants and four staple plants. It is expected that most of the rayon producing equipment for these plants will be provided by the installations moved from Germany and by the former Japanese-owned plants in Korea and Manchuria. With this equipment already on hand, the fourth five-year plan may achieve greater success than the third five-year plan, the *Organon* notes. The previous plan called for the construction of 12 rayon plants between 1933 and 1937, but because of difficulties in procuring machinery and raw materials, only two plants were completed.

Firm Patents New Twist Setting Process

The Industrial Rayon Corp. of Cleveland announced May 28 that patents had been issued to the firm on a new process of electronic twist setting for tire cord and other textile products. Known as Lektroset, the process has been in use at Industrial's Cleveland and Painesville, O., plants for several years.

Lektroset provides a completely new means of setting the twist in rayon tire cord. Packages of the cord are passed through a high frequency electrical field. This results in so uniform a reaction that cones containing as much as 18 or more pounds of rayon tire cord may be effectively treated. Such giant cones are used in the weftless method of tire construction.

The Lektroset process is completed in a matter of minutes, yet it insures a uniform twist setting in rayon cord. Industrial Rayon Corp., which developed the Lektroset process, is widely known for its outstanding continuous process method of making rayon yarn which has been called a revolution in rayon.

Manhattan Rubber Honors Veteran Employees

Fifty-nine new 25-year employees of the Manhattan Rubber Division, Raybestos-Manhattan, Inc., Passaic, N. J., were honored as Manhattan Pioneers at the third annual dinner of the organization held May 25 at Mountain View, N. J. The dinner, attended by more than 500 pioneers and their wives or husbands, also honored those pioneers entering new five-year groups. J. F. D. Rohrbach, executive vice-president of Raybestos-Manhattan, Inc., who was uncertain of being able to attend, arrived directly from a business trip to Canada. The new class, the largest to reach the 25-year milestone in Manhattan's history and perhaps the largest in any industrial firm in the East, was presented by Dennis J. Fenelon, personnel manager, to Harry V. Snyder, factory manager, who welcomed the new class and presented them with gold pioneer pins.

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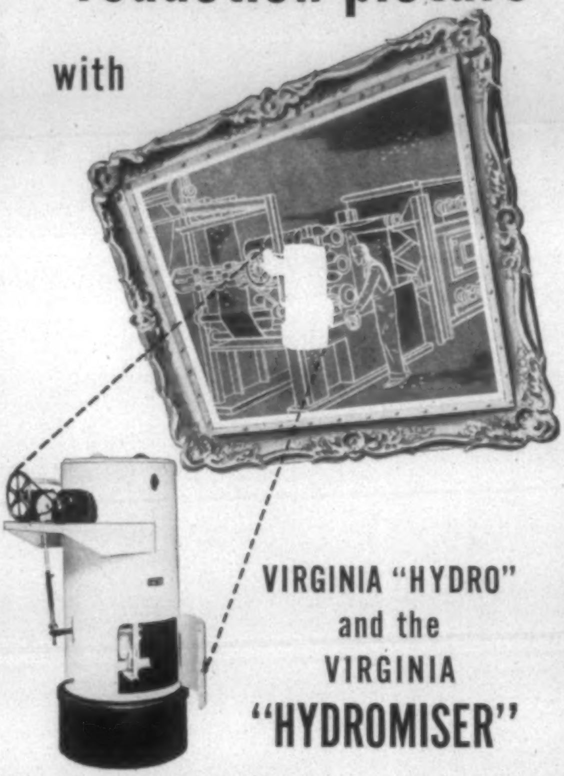

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Murchison Warns Buyers On Withholding

With mathematical probabilities pointing to extremely scarce cotton and continuing high cotton prices for at least another year, withholding of normal purchases of cotton goods in the expectation of substantial price declines does not seem to fall within an area of realism, Dr. C. T. Murchison, president of the Cotton-Textile Institute, told the National Association of Purchasing Agents at a meeting in New York City this month.

"Not only do we find the dangers of 1920 and 1929 almost completely absent from the present scene, we also find that we have available today certain protective devices which would prevent the repetition of those dangers," he declared. "We have a program of agricultural price support which will certainly make impossible any such price collapse as occurred in the 1920s and 1930s. We have Federal wage and hour regulations which are calculated to offer strong resistance to disintegration of the wage structure. Trading on the commodity exchanges and on the security exchanges is so regulated as to prevent the dangerous excesses of former days. A general collapse of the banking system would now be regarded as a virtually impossible thing. Our national economic foundations can be shaken only by the impact of international forces operating in a world of political and military chaos.

"In reaching these conclusions it is not my purpose to imply that the economic activity of our country can continue indefinitely at the maximum intensity of the past two years. When conditions of scarcity have been overcome we must expect business to operate on a replacement basis unless new industries and new commodities are developed which will broaden the range of production and consumer demand. It must also be recognized that a boom period, such as we are having, employs marginal plants, marginal workers, mushroom enterprises and marketing adventurers whose offices are their hats. There is, of course, no room for these in a normal, streamlined economy. So do not be upset by fears as you anticipate the list of business failures which does no more than announce their taking off. Business failures of that type make for a sounder economy."

Dr. Murchison pointed out that there has been no appreciable decline in cotton textile production since the war and that the current rate of operations is scarcely more than six per cent under that of maximum capacity. In many lines, he said, mills have caught up with civilian requirements but some of the most important cloths are still behind consumer needs. Cotton goods, he added, are being shipped from mills as rapidly as they are made, inventories approximate a week and a half's production and export demand continues heavy.

"Public income has more than kept pace with the increase in prices," he asserted. "To argue that the American people are in a state of hardship which must be immediately remedied is to argue that we should tamper arbitrarily with the highest degree of prosperity we have ever known."

Much of the recent hesitancy in business he attributed to the activities of "phony forecasters" who, he declared, "beginning last October and culminating in the early spring of this year with a tremendous crescendo of terrifying alarms, almost succeeded in wrecking the nation's prosperity. They were aided and abetted by certain political forces which thrive on portents of disaster and on the miseries of the people. Behind every bush there lurks a would-be politician hoping and praying for national calamity which will enable him to spring forth with his own particular nostrum as a saviour of the people. These, of course, joined in the chorus that resounded to high heaven."

Canada Backs Australia In Wool Dispute

It is made clear that Canada will stand firmly alongside Australia and other dominions in their demand for a satisfactory settlement of the critical wool issue at Geneva. Outcome is still highly uncertain, but it is certain that unless the United States Congress withdraws it demand for a higher tariff, or unless President Truman settles any proposed escalator clause as agreed upon by Congress, Geneva will break down.

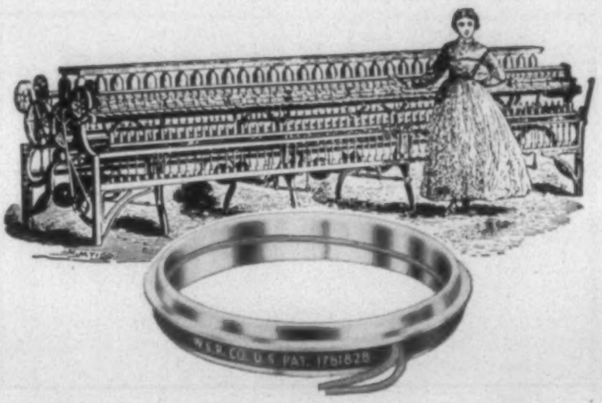
But it is thought inconceivable in Ottawa that the United States, after two years' intensive effort, will allow this to happen. In short, it is thought that United States will at least agree to bid the wool item at the present 34 cents a pound rate, even if no tariff concession is offered. At this point, aroused political sentiment in Canberra and Australia comes into focus. Because of this issue, Dr. Coombs, head of the Australian delegation in Geneva, has been recalled home. As well, reports are already emanating from Australia of possible retaliatory action in that country against American goods. It also seems certain that a ministerial delegate will return to Geneva with Dr. Coombs.

It is feared that the issue may become so inflamed politically in Australia that even a binding of the U. S. rate at its present level will prove unacceptable and that Australians may insist on something which it is now conceded that Americans are most unlikely to give—namely, an actual reduction in the present wool tariff. Apart from the central and explosive wool controversy the general picture at Geneva is considered satisfactory. Assuming a solution is found to wool, it is thought that agreement can be reached during the next three months on tariff reductions which, over-all, will amount to about 20 per cent from present most-favored-nation rates. Such a reduction will bring a responding cut in a large number of British preferential margins and the wiping out of a number of "bound" preferential rates.

In respect of wool, Canada stands firmly with Australia, South Africa, New Zealand and Britain in demanding that the United States make a satisfactory setttlement. This is not an issue which affects Canada directly, but its settlement does involve empire preferential margins as well as the ability of the United Kingdom to deal effectively with Canada and the United States.

Vocation Textile School Awards Diplomas

Closing exercises of the North Carolina Vocational Textile school at Belmont were conducted June 11 with 60 diplomas being awarded by Principal Chris E. Folk to students who had completed courses and 74 certificates to those who had partially completed courses in yarn manufacturing, mill maintenance and weaving and designing. Dean Malcolm E. Campbell of North Carolina State College school of textiles, Raleigh, presented the diplomas and certificates. Special recognition was given by Principal Folk to John Boysworth, employee of Textron Southern, Charlotte, who did not miss a day during the session from Sept. 1, 1946, to June 11. New classes in all three courses are scheduled to begin July 1, it was announced.



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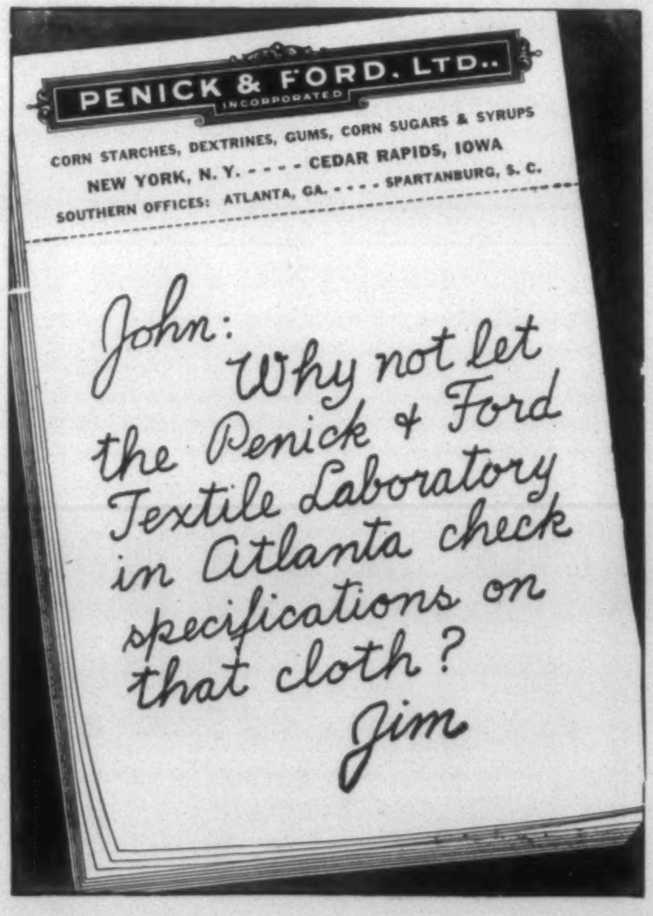
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Cotton Goods Market

The amounts of buying for the next two months will be greatly determined by the inventory position of the industrial cloth users, according to Worth Street sellers. Buying in sporadic bursts by all sectors of the New York market should be the main activity as buyers attempt to keep inventories at a level point, but fourth quarter activity in industrial cloths is expected to pick up considerably.

Some sectors of the market hold that prices will rise as soon as activity becomes general. They point out that many of the profit margins are so small as to make production valueless and they cite the sharp rise in prices in other sectors of the market immediately following the demise of O. P. A. Thus, they reason, as demand increases for the heavyweight cloths, and in the face of rising costs, they certainly are entitled to move from the O. P. A. levels which have prevailed in this market for the past year.

Others, however, feel that price rises will be difficult in the face of the lower price psychology of the buyers. While they admit that prices are not good on some cloths, nevertheless, they say, they are more concerned with maintaining full production than increased profit margins at the moment.

Some mill men say that those who expected to stay out of the future market in the expectation of obtaining what goods they need in the spot market, are taking a risky gamble. Despite speculation, there is no indication that any of the large integrated organizations are planning fine gray sales on a large scale, and lawns and broadcloths are expected to remain tight through the third quarter. Those who need spot goods at this time may find themselves paying heavy premiums, it is warned.

Industrial cloth sellers report resistance for third quarter goods at prices the same as those offered on a contract basis at the beginning of the year. Despite this, these sellers see no substantial softening of prices. Other fine specialties are being sold through the last half of the year with some prices below the peaks of a month ago.

Cotton broad woven goods production amounted to 2,470,000,000 yards during the first quarter of 1947, the Bureau of the Census has announced. This was five per cent greater than during the fourth quarter of 1946 and was the greatest production since the first quarter of 1944.

Of the 398,000 looms in place on March 29, 1947, there were 387,000 active on the first shift, 365,000 on the second, and 157,000 on the third. Loom operation totaled 486,000,000 hours, a four per cent increase above the fourth quarter of 1946.

A total of 950,000,000 pounds of yarn was consumed in the production of cotton broad woven goods and tire fabrics, of which 877,000,000 pounds were cotton, 61,000,000 pounds rayon, and 12,000,000 pounds other yarns.

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Cotton Yarns Market

Aware that many customers will be busy taking inventory near the end of this month, some yarn distributors in Philadelphia feel that prospects are slim for any spurt in new business in the meantime. Accordingly, such sources expect to continue handling mainly fill-in orders.

Because there is said to be an ample supply of most carded yarns at present, distributors handling such yarns say they are only pushing sales when some customer is believed to be in need of a certain count, or where spinners provide revised price lists which may rouse buyer interest on a small scale.

Information from various sections of the market indicates that some carded yarn spinners are standing pat on their policy of shutting down, rather than trimming prices to what are said to be "unprofitable" levels. Observers recently back from the South say some producers who have shut down carded spinning establishments say they will not reopen until they can line up some new business at what are considered worthwhile prices.

While it is held that numerous spinners adhere to this policy, distributors say there are other carded yarn producers who apparently are willing to take a loss of a few cents a pound rather than close down completely. Such spinners are said to feel they may lose some key personnel over a prolonged shutdown and prefer to keep their organizations intact.

Virtually all distributors report they are not pushing yarn sales at present, feeling that such tactics would be unwise at this time. Sellers are, however, keeping in close touch with customers in order to be aware of their needs, once the tempo of the market quickens.

Domestic out-turn of staple cotton in lengths suitable for spinning standard gray combed yarns will remain short of demand. Growers in parts of the Mississippi Valley area will produce enlarged supply of an improved $1\frac{1}{16}$-inch fiber that is claimed to be strong enough to substitute for scarce varieties $\frac{1}{16}$ to an eighth of an inch longer. Eventually, it is predicted, other sections of the cotton states will plant this improved staple.

Spinners' spokesmen state the action of President Truman authorizing importation of additional 23,000,000 pounds of staple cotton through next three months, is a life-saver to mills spinning fine-count weaving yarns, some of which lately have been down to a week's supply.

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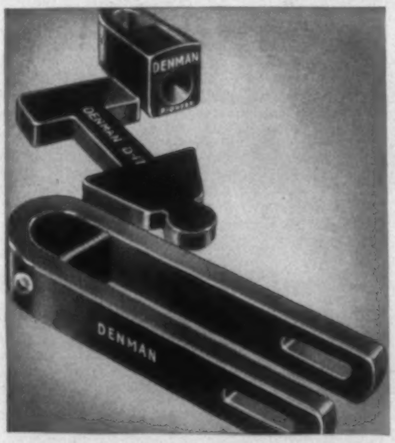

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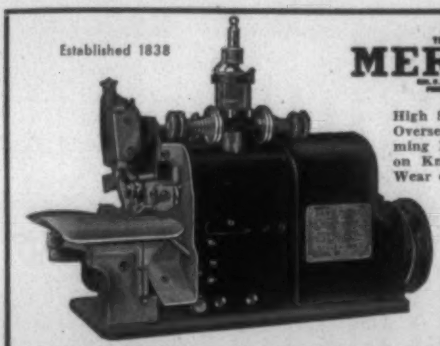

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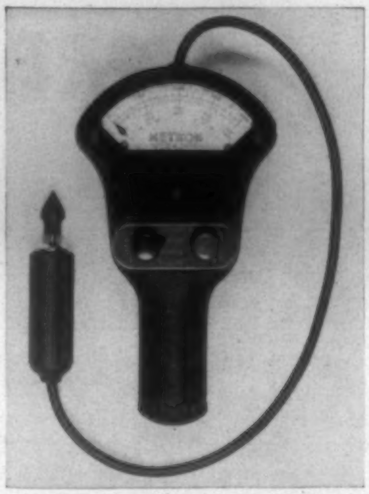

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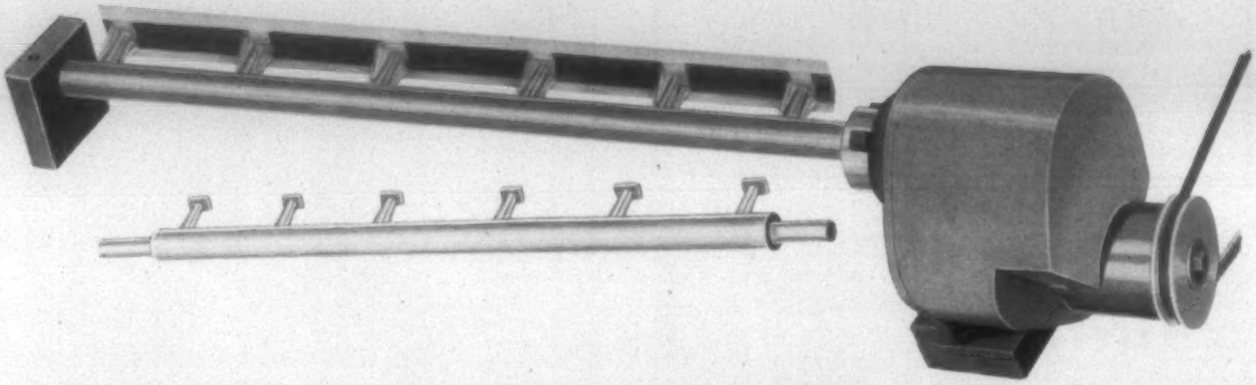

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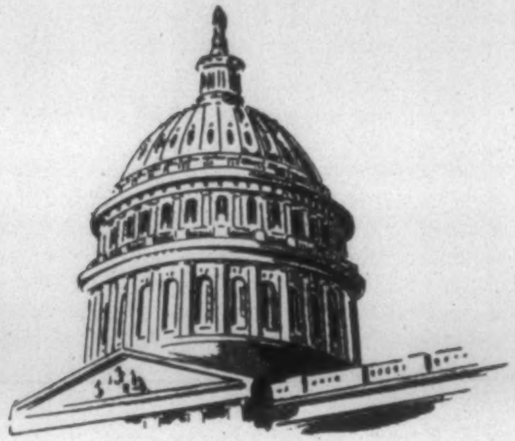

[Exclusive and Timely News from the Nation's Capital]

While unions and their leaders talk resistance and court tests, they are, in reality, getting ready for a new way of doing things. For them the new labor act changes the whole way of life. They earnestly hope for a veto, but they know, too, that with or without presidential approval, it will become law. Court tests will come later without doubt as various issues arise, but unquestionably the Congress that enacted the Wagner Act has the power to amend it. Basically, the new act imposes responsibility, which is the essence of law. Unions and their leaders—in official conduct, in contract making and in carrying out contracts—are made subject to the same law and concept that is obligatory on employers. The sun is setting on the "happy warrior" era of riotous use of power, shutting down industries for a minor grievance, strangling a whole nation, and saying who among millions may work and who must be fired.

Within the last month 900 strike notices have been filed with the Labor Department, far above the normal number. Chairman Hartley, after an analysis of them, says pithily that if an epidemic of strikes is attempted in reprisal for labor legislation, new amendments that are really "tough" can be expected.

Many House members are genuinely dissatisfied with the mild changes to the Wagner Act that have resulted from the legislative effort that started on Jan. 23. Some of them feel it is synthetic legislation. They are prepared if union reprisals are attempted to revive the original Hartley Bill and to go into a "deadlock" with the Senate on acceptance. Even "labor's friend," Senator Ives (R., N. Y.) admits the Hartley Bill will have a chance if there are attempted reprisals.

Advisers to the President presented him with a three-pointed dilemma on the bill. One group told him approval would cost him the labor vote in 1948, and another group said that with a veto he could kiss goodbye to the non-labor "white collar" and farm vote. Legislative advisers told him of the virtual certainty Congress would over-ride a veto, dragging the whole controversy into the 1948 campaign. An over-ridden veto, they added, would almost certainly commit the President's party in 1948 to repeal if returned to power.

Philip Murray of C. I. O. demanded not only a veto, but that the President also take the "strongest measures" to insure Congress upholding it. His demand was interpreted as calling on the President to apply pressure or threaten reprisals to Democrats who failed to vote to uphold. The dual top-heavy and bi-partisan vote by which the conference report was adopted indicated much more than partisan politics behind it—the pressure and sweep of public sentiment for long overdue labor reform.

The Taft-Hartley Bill is unique both as the first major amendment of the Wagner Act in 14 years and in the fact that few bills in recent years have had more careful preparation, detailed consideration and searching debate, or were the subject of more extensive and thorough hearings before coming from committees. Debate in the Senate lasted for weeks, where, in 1935, the Wagner Act passed with less than two days of debate.

Provision in the bill that worries union leaders most is that which allows employers to bring damage suits against unions. They think enough suits would drain their treasuries dry. Today the unions are worth suing. A. F. of L. reported a balance in hand last year of $1,742,000, and C. I. O. assets are recently given as $1,322,287.61. Some of the big constituent unions, like bricklayers and coal miners, have reserves up to $15,000,000, or more.

As a whole, the bill is less stringent than what majorities in both branches of Congress wanted to pass. It was toned down in the interest of avoiding a veto, or over-riding a veto, if forthcoming. It is milder than the Case bill, which narrowly escaped enactment in 1946, and lacks much of being the air-tight, tough proposal that was envisioned by the House Labor Committee and overwhelmingly passed by the House.

Again, few bills in the history of Congress have had so much absurd propaganda loosened by those seeking to discredit. Union chiefs desperately sought to whip up a storm of protest against what they called a "slave labor" bill. Proponents believed rank-and-file workers would be impressed by its fairness and moderation, and the extent to which it emancipates them from the tyranny of, and helpless subjection to, those crying "slave labor" bill.

A. F. of L. leaped into the breach to defeat the bill by spending $600,000 in full page or five-column ads in 110 daily newspapers from coast to coast, and $400,000 more for big chain star-dotted radio programs. Another $500,000 went for mass meetings, reprints, publicity and top-flight speakers. The ads, at least in part, were issued through the Albert Frank Guenther Law Agency, specialist in Wall Street financial advertising, and written largely by Louis Ruppel, late managing editor of Hearst's Chicago Herald-American. The ad list was made up with an eye to readers who favored labor legislation.

C. I. O. decided to stay away from the Bourbon press and spend its money on mass meetings, brass bands, red fire, giant parades, and protesting letters to the President. While joining A. F. of L. in the theme song of "We're desperate," it chose to work the other side of the street and arouse organized workers to the "greatest protest and demonstration on record." News releases up to 30 pages in length, condemning the bill, were distributed to news writers.

The new law lays the same prohibition on unions against political contributions as is on banks and corporations. One House Republican said this was enough to cause a veto. Hereafter union bosses cannot use union funds as their own, with no sense of responsibility to their members. The loophole is that unions can set up separate agencies for political purposes, like C. I. O.'s P. A. C., financed by "some means or other." But unions must render full public accounting of what they do with their money.

The Senate's New Deal remnant, led by Morse R., Ore.) and Pepper (D., Fla.), set up a long and clamorous opposition to the Taft-Hartley Bill. They cried bitter reproaches against the Republican-Southern Democratic coalition that waited, quietly poised, to give the bill a thumping passage. Senator Barkley (D., Ky.) sounded the last weary note of retreat before the vote. This bill, more than any other of this Congress, rings down the curtain and closes the door on the era of the New Deal.

John L. Lewis is not expected to call another coal strike on July 1, which would allow the government to seek another injunction from Justice Goldsborough. He and his miners are expected to follow their usual practice of not working when there's no contract. Attorney General Clark may be forced to urge the thesis that concerted work stoppage, by whatever means, is a strike.

The new labor law presents many hurdles to Lewis, including collections for his welfare fund, requiring individual worker authorizations for a dues check-off, and relieving employers from recognizing foremen's unions. Coal Administrator Collisson, while still wrestling with the Centralia mine disaster, learned that coal miners at Nellis, W. Va., were on strike because of employer insistence they wear goggles as protection from flying particles, as required by the Federal safety code. The local union had twice voted against any form of eye protection.

Mr. Truman has only himself to blame for the high price wave of which he complains, says Senator Taft. He added that vetoes of the tax and labor bills could only be interpreted as a further bid for price rises. The Ohioan said the President, through encouragement of arbitrary wage increases 18 months ago, "created all the basic conditions which compel high prices." He said the favors price reductions, too, but not business run at a loss.

Congress expects to recess late in July with the understanding it may be called back at any time. It will not adjourn sine die, so that majority leaders can call it back at any time deemed necessary.

Republican deflections in the Senate have almost destroyed the majority gained in the last election. More and more G. O. P. leaders lean on a dozen Democratic votes from the South to put over their measures and give them a majority. Republicans not going along with the majority are Morse (Ore.) and Langer (N. D.) and very often Tobey (N. H.), Aiken (Vt.), and Cooper (Ky.)

The Republican program on the vital tax and labor bills would have been wrecked without Southern support. Morse and Langer take the New Deal contention on every major issue, with Aiken and Tobey often joining them. No one can tell whether Cooper will vote as a Republican or a Democrat.

A. F. of L. leaders are planning an intensified campaign in behalf of national health insurance, higher minimum wage rates, low-cost housing, increased social security, and tax relief in the low income brackets. They feel they have done too much back slapping among themselves, and let C. I. O. get out in front in urging social welfare and worker betterment measures.

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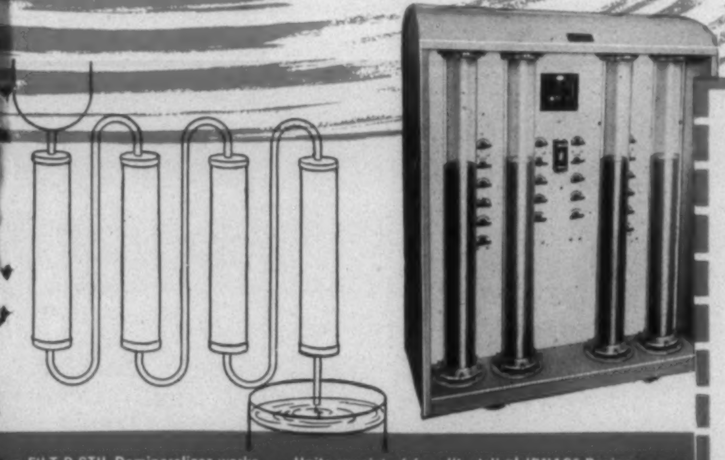

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